



SHOUT
SHARE **IT**



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THE NEW YORK BOTANICAL GARDEN

The chelæ are blue, becoming yellowish near the extreme tip, which is red. The tubercles of the chelæ are yellow. The antennæ are dark blue, with the alternating rings paler. The young mentioned above as having been taken from their tunnel, varied in total length from three-fourths to one and one-eighth inches. In color they were bluish green, rarely pale and flesh colored. Faxon has recorded that in the Indian Territory the Indians call this species "red crayfish." For this locality "blue crayfish" will be an appropriate name.

5. *Cambarus propinquus* Girard. This common species has been taken in the Allegheny and Monongahela Rivers and in many of the small streams throughout the county. In color it is variable, being usually a clear brownish green, tinged with red and with a large red blotch on the side of the carapace near the posterior edge.

6. *Cambarus rusticus* Girard. Ohio River, Neville Island. This species is similar in color to *propinquus*, which species it very much resembles.

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 Tree and Allegheny County
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II. A PRELIMINARY LIST OF THE VASCULAR FLORA OF ALLEGHENY COUNTY, PENNSYLVANIA.

BY JOHN A. SHAFER, PH.G.

After waiting a number of years for the appearance of a Flora of Allegheny County, Pennsylvania, from another source, I have concluded to supply the deficiency in a manner as comprehensive as is possible with the material at present available.

At best the present list must be regarded as wholly preliminary. Nevertheless it is published in the hope that it may serve as a guide to students in their systematic work, as well as an invitation to others to participate in the preparation of a fuller and more perfect catalogue in the near future. Collectors are accordingly urged to make full records of each species wherever found. It is further hoped, and confidently expected, that all who use this list will submit to the writer the lists which they make, so as to render possible the compilation of a final catalogue. Those who submit such lists are also requested to kindly accompany them with herbarium specimens, in order to insure a correct identification. These specimens should, if possible, be submitted in duplicate; one set to be incorporated with the herbarium of the Carnegie Museum, in order to preserve a comprehensive representation of the species and its stations, the other set to be returned to the contributor after examination, determination, and study. Due credit will be given in the Museum catalogues, or future publications, for the specimens donated, or submitted. Explicit data as to the time of flower and fruit, (both of which should be collected), as well as the location, should be made and recorded on the labels. In noting location great exactness should be observed, and the collector should enter upon his labels the township, and even the farm and field, and in towns the name of the street and the number of the lot. Collectors in neighboring counties are invited to use this list for their respective districts, and likewise to submit their lists and specimens, with a view to the future preparation of a complete catalogue of the flora of western Pennsylvania.

No attempt has been made to utilize some of the quite recently

published revisions of a few of the more difficult groups. The order of arrangement is as nearly as possible that of Gray's Manual, sixth edition, selected only as a matter of convenience to those for whom this list is principally intended. The writer, being in the fullest accord with the nomenclature of the most recent authors, all are urged to acquire the "new names" at the earliest moment. To aid in this, the names used in Britton & Brown's Illustrated Flora of the Northern States and Canada are employed, those of Gray's Manual, where synonyms, being in italics. The numbers succeeding the natural order are those employed by Britton & Brown, and may serve as a guide to the arrangement of an herbarium in accordance with the accepted classification, the greater divisions being indicated by the Roman numerals, as follows:

- I. Pteridophyta.
- II. Gymnospermæ.
- III. Monocotyledones.
- IV. Chloripetalæ.
- V. Gamopetalæ.

The arrangement will at once be understood. No attempt at localizing the species is made except where it is considered rare and has been found but once or twice.

JOHN A. SHAFFER.

Explanation of the signs used in this list:

* The specimen is in the herbarium of the Carnegie Museum.

|| The species has been seen by the writer, but is not in the herbarium.

† Reported, but is not in the herbarium.

‡ The species may occur here, having been reported from a neighboring county.

? Reported, but of doubtful occurrence.

The blank space under each species is intended for the use of students of botany and collectors, who may desire to insert notes, or the names of additional species.

RANUNCULACEÆ Jussieu.

CROWFOOT FAMILY. IV-26.

CLEMATIS Linnæus.

* *C. Virginiana* Linnæus. Virgin's bower.

* *C. Viorna* Linnæus. Leather-flower.

Near Oakdale Station, June, 1873, Professor B. H. Patterson.

ATRAGENE Linnæus.

- § **A. Americana** Sims. Purple virgin's bower.
Clematis verticillaris De Candolle.

ANEMONE Linnæus.

- * **A. Virginiana** Linnæus. Tall anemone.
- * **A. Canadensis** Linnæus. Canada anemone.
A. Pennsylvanica Linnæus.
Hampton Township, Herron Station, July 2, 1891, Dr. A. Koenig.
- * **A. quinquefolia** Linnæus. Wind-flower.
Shaler Township, branch of Pine Creek, near Glenshaw, April 22, 1886.
- § **A. trifolia** Linnæus. Mountain anemone.

HEPATICA Scopoli.

- * **H. Hepatica** (Linnæus). Round liver-leaf.
- * **H. acuta** (Pursh). Pointed liver-leaf.

SYNDESMON Hoffmansegg.*ANEMONELLA* Spach.

- * **S. thalictroides** (Linnæus). Rue-anemone.

THALICTRUM Linnæus.

- * **T. dioicum** Linnæus. Early meadow-rue.
- * **T. polygamum** Muhlenberg. Tall meadow-rue.
- * **T. purpurascens** Linnæus. Purplish meadow-rue.

TRAUTVETTERIA Fischer & Meyer.

- * **T. Carolinensis** (Walter). False bugbane.
T. palmata Fischer & Meyer.
 Banks of Ohio River, near Pittsburgh, July 4, 1888, C. D. Beadle.

RANUNCULUS Linnæus.

- * **R. abortivus** Linnæus. Small-flowered crowfoot.
- § **R. micranthus** Nuttall. Rock-crowfoot.
R. abortivus var. *micranthus* A. Gray.
- † **R. sceleratus** Linnæus. Cursed crowfoot.
- * **R. recurvatus** Poiret. Hooked crowfoot.
- * **R. fascicularis** Muhlenberg. Tufted buttercup.
- * **R. septentrionalis** Poiret. Marsh buttercup.
- † **R. Pennsylvanicus** Linnæus. Bristly buttercup.
- † **R. bulbosus** Linnæus. Bulbous buttercup.
- * **R. acris** Linnæus. Meadow buttercup.

BATRACHIUM S. F. Gray.

- † **B. trichophyllum** (Chaix). Water-crowfoot.
Ranunculus aquatilis var. *trichophyllum* De Candolle.

CALTHA Linnæus.

- * **C. palustris** Linnæus. Marsh-marigold.

AQUILEGIA Linnæus.

- * **A. Canadensis** Linnæus. Wild columbine.

- || **A. vulgaris** Linnæus. European columbine.

Moon Township, roadside west of Carnot, June, 1888.

DELPHINIUM Linnæus.

- * **D. urceolatum** Jacquin. Tall larkspur.

D. exaltatum Aiton.

Patton Township, east of Wall's Station, Aug. 24, 1869, Rev.
S. W. Knipe.

- * **D. tricorné** Michaux. Dwarf larkspur.

A white form is occasionally found.

- * **D. Consolida** Linnæus. Field larkspur.

Escaped to roadsides, Harrison and Moon Townships.

CIMICIFUGA Linnæus.

- ? **C. Americana** Michaux. American bugbane.

- * **C. racemosa** (Linnæus). Black cohosh.

ACTÆA Linnæus.

- † **A. rubra** (Aiton). Red baneberry.

- * **A. alba** (Linnæus). White baneberry.

HYDRASTIS Ellis.

- * **H. Canadensis** Linnæus. Golden seal.

MAGNOLIACEÆ J. St. Hilaire.**MAGNOLIA** FAMILY. IV-24.**MAGNOLIA** Linnæus.

- * **M. acuminata** Linnæus. Cucumber-tree.

LIRIODENDRON Linnæus.

- * **L. Tulipifera** Linnæus. Tulip-tree.

ANONACEÆ De Candolle.

CUSTARD APPLE FAMILY. IV-25.

ASIMINA Adanson.

- * **A. triloba** (Linnæus). North American papaw.

MENISPERMACEÆ De Candolle.

MOONSEED FAMILY. IV-28.

CEBATHA Forskal.**COCCULUS** De Candolle.

- ? **C. Carolina** (Linnæus). Carolina moonseed.

MENISPERMUM Linnæus.

- * **M. Canadense** Linnæus. Moonseed.

BERBERIDACEÆ Torrey & Gray.

BARBERRY FAMILY. IV-27.

BERBERIS Linnæus.

- § **B. vulgaris** Linnæus. European barberry.

CAULOPHYLLUM Michaux.

- * **C. thalictroides** Michaux. Blue cohosh.

JEFFERSONIA Barton.

- * **J. diphylla** (Linnæus). Twin-leaf.

PODOPHYLLUM Linnæus.

- * **P. peltatum** Linnæus. May-apple.

NYMPHÆACEÆ De Candolle.

WATER-LILY FAMILY. IV-22.

CASTALIA Salisbury.*NYMPHÆA* Tournefort.§ **C. odorata** (Dryander). White water-lily.*N. odorata* Aiton.§ **C. tuberosa** (Paine). Tuberous water-lily.*N. tuberosa* Paine.**NYMPHÆA** Linnæus.*NUPHAR* Smith.§ **N. advena** Solander. Yellow pond-lily.*Nuphar advena* Aiton.

Note.—None of the water-lilies have been reported from Allegheny County.

SARRACENIACEÆ La Pylaie.

PITCHER-PLANT FAMILY. IV-35.

SARRACENIA Linnæus.§ **S. purpurea** Linnæus. Pitcher-plant.

In the absence of bogs, we can scarcely hope to find it in Allegheny County.

PAPAVERACEÆ B. Jussieu.

POPPY FAMILY. IV-31.

SANGUINARIA Linnæus.* **S. Canadensis** Linnæus. Bloodroot.**STYLOPHORUM** Nuttall.† **S. diphyllum** (Michaux). Yellow poppy.

CHELIDONIUM Linnæus.

- * **C. majus** Linnæus. Celandine.

PAPAVER Linnæus.

- * **P. somniferum** Linnæus. Common poppy.

- || **P. dubium** Linnæus. Long smooth-fruited poppy.
Pittsburgh, Bailey Ave., July, 1888.

ARGEMONE Linnæus.

- † **A. Mexicana** Linnæus. Prickly poppy.

ADLUMIA Rafinesque.

- * **A. fungosa** (Aiton). Alleghany vine.

A. cirrhosa Rafinesque.

Shaler Township, P. & W. R. R. tunnel, Sept., 1886, Hon. J.
D. Shafer.

BICUCULLA Adanson.*DICENTRA* Bernhardt.

- * **B. Cucullaria** (Linnæus). Dutchman's breeches.

Dicentra Cucullaria Gray.

- * **B. Canadensis** (Goldie). Squirrel-corn.

Dicentra Canadensis Gray.

CAPNOIDES Adanson.*CORYDALIS* Ventenat.

- * **C. sempervirens** (Linnæus). Pale corydalis.

Corydalis glauca Pursh.

Harrison Township, rocks, on roadside near John Parke's, July
8, 1900.

- † **C. flavulum** (Rafinesque). Yellow corydalis.

Corydalis flavula De Candolle.

- * **C. aureum** (Willdenow). Golden corydalis.
Corydalis aurea Willdenow.

FUMARIA Linnæus.

- † **F. officinalis** Linnæus. Fumitory.

CRUCIFERÆ B. Jussieu.

MUSTARD FAMILY. IV-32.

DENTARIA Linnæus.

- * **D. diphylla** Michaux. Pepper-root.
- * **D. laciniata** Muhlenberg. Cut-leaved toothwort.
- || **D. heterophylla** Nuttall. Slender toothwort.
Pittsburgh, 23d Ward, near Salt-works Station, 1888, Prof. W. S. Jackman.

CARDAMINE Linnæus.

- † **C. hirsuta** Linnæus. Hairy bitter-cress.
- * **C. Pennsylvanica** Muhlenberg. Pennsylvania bitter-cress.
- * **C. purpurea** (Torrey). Purple cress.
South Fayette Township, near Marshalsea, May 11, 1900.
- * **C. bulbosa** (Schreber). Bulbous cress.
C. rhomboidea De Candolle.
- * **C. rotundifolia** Michaux. American water-cress.

ARABIS Linnæus.

- * **A. lyrata** Linnæus. Rock-cress.

- * **A. dentata** (Torrey). Toothed rock-cress.
Neville Township, south shore of island, May 3, 1890; O'Hara Township, river bank near Ross Station, May 9, 1900.
- * **A. lævigata** (Muhlenberg). Smooth rock-cress.
- * **A. lævigata Burkii** Porter. Burk's rock-cress.
- * **A. Canadensis** Linnæus. Sickie-pod.
- † **A. glabra** (Linnæus). Tower mustard.
A. perfoliata Lamarck.

DRABA Linnæus.

- * **D. verna** Linnæus. Whitlow-grass.

KONIGA Adanson.*ALYSSUM* Tournefort.

- * **K. maritima** (Linnæus). Sweet alyssum.
Sewickley, "ashery," foot of Walnut street, August, 1892.
Spreading! August 10, 1897.

RORIPA Scopoli.*NASTURTIUM* R. Brown.

- † **R. Nasturtium** (Linnæus). Water-cress.
N. officinale R. Brown.
- * **R. palustris** (Linnæus). Marsh-cress.
N. palustre De Candolle.

- * **R. Armoracia** (Linnæus). Horseradish.

BARBAREA R. Brown.

- * **B. Barbarea** (Linnæus). Common winter-cress.
B. vulgaris R. Brown.

† **B. præcox** (J. E. Smith). Scurvy-grass.

HESPERIS Linnæus.

* **H. matronalis** Linnæus. Dame's rocket.

ERYSIMUM Linnæus.

* **E. cheiranthoides** Linnæus. Worm-seed mustard.

SISYMBRIUM Linnæus.

* **C. officinale** (Linnæus). Hedge-mustard.

† **S. altissimum** Linnæus. Tall hedge-mustard.

STENOPHRAGMA Celakowsky.

* **S. Thaliana** (Linnæus). Mouse-ear cress.

Sisymbrium Thalianum Gay.

South Fayette Township, dry, stony point, R.R., west of Bridgeville, June 11, 1900.

IODANTHUS Torrey and Gray.

THELYPODIUM Endlicher.

* **I. pinnatifidus** (Michaux). False rocket.

Patton Township, Wall's Station, Aug. 24, 1869, Rev. S. W. Knipe; June 10, 1891, Thomas Seal.

BRASSICA Linnæus.

* **B. nigra** (Linnæus). Black mustard.

† **B. arvensis** (Linnæus). Wild mustard.

* **B. campestris** Linnæus. Turnip.

Frequently persists for several years.

BURSA Weber.*CAPSELLA* Medicus.

- * **B. Bursa-pastoris** (Linnæus). Shepherd's purse.

LEPIDIUM Linnæus.

- * **L. Virginicum** Linnæus. Wild pepper-grass.
- * **L. campestre** (Linnæus). Field-cress.
 Moon Township, Shafer farm, May 22, 1895.
 Harrison Township, John Potts', near Natrona road, June, 1895.

RAPHANUS Linnæus.

- † **R. Raphanistrum** Linnæus. Wild radish.

- * **R. sativus** Linnæus. Garden radish.
 Frequently persists for several years.

CAPPARIDACEÆ Lindley.

CAPER FAMILY. IV-33.

CLEOME Linnæus.

- * **C. spinosa** Linnæus. Spider-flower.
C. pungens Willdenow.
 Esplin, bank of Ohio River, near P. & L. E. R. R. station, September, 1898.

CISTACEÆ Lindley.

ROCKROSE FAMILY. IV-78.

HELIANTHEMUM Persoon.

- † **H. Canadense** (Linnæus). Rock-rose.

LECHEA Linnæus.

- † **L. minor** Linnæus. Thyme-leaved pin-weed.

- * *L. racemulosa* Michaux. Oblong-fruited pin-weed.

VIOLACEÆ De Candolle.

VIOLET FAMILY. IV-79.

VIOLA Linnæus.

- † *V. pedata* Linnæus. Bird's-foot violet.

- * *V. palmata* Linnæus. Hand-leaved violet.

- * *V. obliqua* Hill. Meadow violet.

A white flowering form, near Perrysville, March 30, 1889, Dr.
A. Ziegler.

- † *V. villosa* Walter. Southern wood violet.

- * *V. domestica* Bicknell. Yard violet.

- † *V. cucullata* Aiton. Marsh blue violet.

- * *V. communis* Pollard. Common blue violet.

- * *V. sagittata* Aiton. Arrow-leaved violet.

- * *V. ovata* Nuttall. Ovate-leaved violet.

- * *V. blanda* Willdenow. Sweet white violet.

- § *V. blanda amœna* (Le Conte). Swamp sweet violet.
V. blanda var. *palustriformis* Gray.

- * *V. primulæfolia* Linnæus. Primrose-leaved violet.
Neville Township, head of island, July, 1898.

- * **V. lanceolata** Linnæus. Lance-leaved violet.
- † **V. rotundifolia** Michaux. Round-leaved violet.
- * **V. pubescens** Aiton. Hairy yellow violet.
- * **V. scabriuscula** (Torrey and Gray). Smoothish yellow violet.
- § **V. hastata** Michaux. Halberd-leaved violet.
- * **V. Canadensis** Linnæus. Canada violet.
- * **V. striata** Aiton. Striped violet.
- † **V. Labradorica** Schrank. American dog violet.
V. canina L. var. *Muhlenbergii* Trautvetter.
- * **V. rostrata** Pursh. Long-spurred violet.

CUBELIUM Rafinesque.

SOLEA Sprengel.

- * **C. concolor** (Forster). Green violet.
S. concolor Gingins de Lassaraz.

CARYOPHYLLACEÆ Reichenbach.

PINK FAMILY. IV-21.

DIANTHUS Linnæus.

- * **D. Armeria** Linnæus. Deptford pink.
Allegheny City, Riverview Park, July 14, 1894, Dr. W. R. Hamilton.
- * **D. barbatus** Linnæus. Sweet-william.
Moon Township, Shrode's Hollow, near Carnot, June, 1897.

SAPONARIA Linnæus.

- * **S. officina** is Linnæus. Soapwort.

SILENE Linnæus.

- * **S. stellata** (Linnæus). Starry campion.
- * **S. alba** Muhlenberg. White campion.
S. nivea Otth.
- * **S. vulgaris** (Mœench.). Bladder-campion.
S. Cucubalus Wibel.
 Penn Township, Doak farm, Sept. 21, 1899.
- * **S. Caroliniana** Walter. Wild pink.
S. Pennsylvanica Michaux.
- * **S. Virginica** Linnæus. Fire-pink.
- * **S. antirrhina** Linnæus. Sleepy catchfly.
 "Pittsburgh, May, 1886"; Prof. B. H. Patterson, A. V. R.
 R. track, June, 1900.
- * **S. noctiflora** Linnæus. Night-flowering catchfly.
 Moon Township, Miller's lane, west of Carnot, June 10, 1899.
- * **S. Armeria** Linnæus. Sweet-william catchfly.
- LYCHNIS** Linnæus.
- * **L. coronaria** (Linnæus). Mullein-pink.
 Moon Township: escaped from old gardens; 1898.
- AGROSTEMMA** Linnæus.
- * **A. Githago** Linnæus. Corn cockle.
Lychnis Githago Scopoli.

ARENARIA Linnæus.

- * **A. serpyllifolia** Linnæus. Thyme-leaved sandwort.
Moon Township, Narrows Run, May, 1899.

MÆHRINGIA Linnæus.

- * **M. lateriflora** (Linnæus). Blunt-leaved sandwort.
Arenaria lateriflora Linnæus.

ALSINE Linnæus.**STELLARIA** Linnæus.

- * **A. media** Linnæus. Common chickweed.
- * **A. pubera** (Michaux). Great chickweed.
- * **A. longifolia** (Muhlenberg). Long-leaved chickweed.
- * **A. longipes** (Goldie). Long-stalked chickweed.
- ? **A. uliginosa** (Murray). Marsh chickweed.

CERASTIUM Linnæus.

- * **C. viscosum** Linnæus. Mouse-ear chickweed.
- * **C. vulgatum** Linnæus. Larger mouse-ear chickweed.
- * **C. longipedunculatum** } Muhlenberg. Nodding chickweed.
- * **C. arvense** Linnæus. Field chickweed.

Pittsburgh, "in a lawn, Oakland, June 4, 1888"; Prof. B. H. Patterson.

SPERGULA Linnæus.

- † **S. arvensis** Linnæus. Cornspurry.
Allegheny, Highwood Cemetery, 1893; John Ferguson.

ANYCHIA Michaux.

- * **A. dichotoma** Michaux. Forked chickweed.
- * **A. Canadensis** (Linnæus). Slender forked chickweed.
A. capillacea De Candolle.

PORTULACACEÆ Reichenbach.

PURSLANE FAMILY. IV-20.

PORTULACA Linnæus.

- * **P. oleracea** Linnæus. Common purslane.
- * **P. grandiflora** Hooker. Portulaca.
Occasionally spontaneous.

CLAYTONIA Linnæus.

- * **C. Virginica** Linnæus. Narrow springbeauty.
- * **C. Caroliniana** Michaux. Broad springbeauty.

ELATINACEÆ Lindley.

WATERWORT FAMILY. IV-77.

ELATINE Linnæus.

- E. Americana** (Pursh). Mud-purslane.
Probably overlooked on account of its minuteness.

HYPERICACEÆ Lindley.

ST. JOHN'S-WORT FAMILY. IV-76.

HYPERICUM Linnæus.

- § **H. Ascyron** Linnæus. Great St. John's-wort.

- * **H. prolificum** Linnæus. Shrubby St. John's-wort.
- * **H. ellipticum** Hooker. Pale St. John's-wort.
- * **H. perforatum** Linnæus. Common St. John's-wort.
- * **H. maculatum** Walter. Spotted St. John's-wort.
- * **H. mutilum** Linnæus. Dwarf St. John's-wort.
- † **H. Canadense** Linnæus. Canadian St. John's-wort.

SAROTHRA Linnæus.

- * **S. gentianoides** Linnæus. Orange-grass.
- Hypericum nudicaule* Walter.

TRIADENUM Rafinesque.*ELODEA* Pursh.

- * **T. Virginicum** (Linnæus). Marsh St. John's-wort.
- E. campanulata* Pursh.
Harrison Township, Joseph Johnston's, June, 1900.

MALVACEÆ Necker.

MALLOW FAMILY. IV-74.

ALTHÆA Linnæus.

- * **A. rosea** Cavanilles. Hollyhock.
- Sewickly, "ashery," foot of Walnut St., 1893.
Harrison Township, field of Joseph Johnston, July, 1896.

MALVA Linnæus.

- * **M. rotundifolia** Linnæus. Common mallow.

- * **M. sylvestris** Linnæus. High mallow.
Pittsburgh, old gardens, 31st Ward, 1886.

- || **M. Moschata** Linnæus. Musk mallow.
Harrison Township, Freeport road, near Wormley's barn, July,
1895.

SIDA Linnæus.

- * **S. spinosa** Linnæus. Prickly sida.

ABUTILON Gaertner.

- * **A. Abutilon** (Linnæus). Velvet-leaf.
A. Avicennæ Gaertner.

HIBISCUS Linnæus.

- * **H. Trionum** Linnæus. Venice mallow.
Harrison Township, Breckenridge's hillside, Natrona, July 25,
1895.
Swissvale, August 19, 1900, John M. Milligan.

TILIACEÆ Jussieu.

LINDEN FAMILY. IV-73.

TILIA Linnæus.

- * **T. Americana** Linnæus. Bass-wood.
† **T. heterophylla** Ventenat. White bass-wood.

LINACEÆ Dumortier.

FLAX FAMILY. IV-52.

LINUM Linnæus.

- * **L. Virginianum** Linnæus. Wild yellow flax.

§ **L. striatum** Walter. Ridged yellow flax.

- * **L. usitatissimum** Linnaeus. Common flax.
Spontaneous, especially along railroad tracks.

GERANIACEÆ J. St. Hilaire.

GERANIUM FAMILY. IV-50.

GERANIUM Linnaeus.

- * **G. maculatum** Linnaeus. Crane's-bill.
- * **G. Carolinianum** Linnaeus. Carolina crane's-bill.
Pittsburgh, Stanton Ave., June 14, 1884.
- * **G. pusillum** Linnaeus. Small flowered crane's-bill.

LIMNANTHACEÆ Lindley.

FALSE MERMAID FAMILY. IV-61.

FLØERKEA Willdenow.

- * **F. proserpinacoides** Willdenow. False mermaid.

OXALIDACEÆ Lindley.

WOOD-SORREL FAMILY. 10-51.

OXALIS Linnaeus.

- § **O. Acetosella** Linnaeus. True wood-sorrel.
- * **O. violacea** Linnaeus. Violet wood-sorrel.
- * **O. corniculata** Linnaeus. Yellow procumbent wood-sorrel.
A weed about greenhouses.
- * **O. stricta** Linnaeus. Upright yellow wood-sorrel.

† **O. cymosa** Small. Tall yellow sorrel.

* **O. grandis** Small. Great yellow wood-sorrel.
O. recurva Trelease, not Elliott.

BALSAMINACEÆ Lindley.

JEWEL-WEED FAMILY.

IMPATIENS Linnæus.

* **I. aurea** Muhlenberg. Pale touch-me-not.
I. pallida Nuttall.

* **I. biflora** Walt. Spotted touch-me-not.
I. fulva Nuttall.

RUTACEÆ Jussieu.

RUE FAMILY. IV-54.

XANTHOXYLUM Linnæus.

* **X. Americanum** Miller. Prickly ash.
Moon Township, roadside, Mrs. Eliot's, on Flaugherly Run.
Findlay Township, Chas. Hood's, May, 1897.

SIMARUBACEÆ De Candolle.

AILANTHUS FAMILY. IV-53.

AILANTHUS Desfontaine.

* **A. glandulosa** Desfontaine. Ailanthus.
Spontaneous in and about most towns.

ILICACEÆ Lowe.

HOLLY FAMILY. IV-64.

ILEX Linnæus.

§ **I. monticola mollis** (A. Gray). Broad-leaved holly.

† *I. verticillata* (Linnæus). Black alder.

* *I. lævigata* (Pursh). Smooth winter-berry.

Robinson Township, swamp near Groveton Station, October,
1888.

CELASTRACEÆ Lindley.

STAFF-TREE FAMILY. IV-65.

CELASTRUS Linnæus.

* *C. scandens* Linnæus. False bittersweet.

EUONYMUS Linnæus.

* *E. atropurpureus* Jacquin. Wahoo.

RHAMNACEÆ Dumortier.

BUCKTHORN FAMILY. IV-71.

CEANOTHUS Linnæus.

* *C. Americanus* Linnæus. New Jersey tea.

VITACEÆ Lindley.

GRAPE FAMILY. IV-72.

VITIS Linnæus.

§ *V. Labrusca* Linnæus. Fox-grape.

* *V. æstivalis* Michaux. Summer grape.

* *V. cordifolia* Michaux. Frost grape.

* *V. vulpina* Linnæus. Riverside grape.

V. riparia Michaux.

† *V. rupestris* Scheele. Sand grape.

PARTHENOCISSUS Planchon.*AMPELOPSIS* Michaux.

- * **P. quinquefolia** (Linnaeus). Virginia creeper.

HIPPOCASTANACEÆ Torrey and Gray.

BUCKEYE FAMILY. IV-68.

ÆSCULUS Linnaeus.

- * **Æ. glabra** Willdenow. Ohio buckeye.

Forward Township, in a clearing near Gamble's P. O., June 1886.

- * **Æ. octandra** Marshall. Sweet buckeye.

Æ. flava Aiton.

ACERACEÆ St. Hilaire.

MAPLE FAMILY. IV-67.

ACER Linnaeus.

- § **A. Pennsylvanicum** Linnaeus. Striped maple.

- * **A. spicatum** Lambert. Mountain-maple.

- * **A. Saccharum** Marshall. Rock- or sugar-maple.

- * **A. nigrum** Michaux. Black sugar-maple.

- * **A. saccharinum** Linnaeus. Silver maple.

A. dasycarpum Ehrhart.

- * **A. rubrum** Linnaeus. Red, or swamp maple.

With us this tree grows on rocky hillsides, seldom in lowlands.

- * **A. Negundo** Linnaeus. Ash-leaved maple.

STAPHYLEACEÆ De Candolle.

BLADDER-NUT FAMILY. IV-66.

STAPHYLEA Linnæus.

- * **S. trifolia** Linnæus. American bladder-nut.

ANACARDIACEÆ Lindley.

SUMAC FAMILY. IV-62.

RHUS Linnæus.

- * **R. hirta** (Linnæus). Staghorn sumac.
R. typhina Linnæus.
- * **R. glabra** Linnæus. Smooth sumac.
- * **R. copallina** Linnæus. Dwarf sumac.
- * **R. Vernix** Linnæus. Poison sumac.
R. venenata De Candolle.
O'Hara Township, Swamp by W. P. R. R., near Allegheny City
Poor Farm, Nov., 1899.
- * **R. radicans** Linnæus. Poison ivy.
- † **R. aromatica** Aiton. Fragrant sumac.
-
- POLYGALACEÆ** Reichenbach.
- MILKWORT FAMILY. IV-56.
- POLYGALA** Linnæus.
- † **P. paucifolia** Willdenow. Fringed milkwort.
- † **P. polygama** Walter. Racemed milkwort.
- † **P. Senega** Linnæus. Seneca snakeroot.

- * **P. viridescens** Linnæus. Purple milkwort.
P. sanguinea Linnæus.
- * **P. verticillata** Linnæus. Whorled milkwort.
- * **P. ambigua** Nuttall. Loose-spiked milkwort.

PAPILIONACEÆ Linnæus.

PEA FAMILY. IV-49.

BAPTISIA Ventenat.

- § **B. tinctoria** Ventenat. Yellow wild indigo.
- * **B. australis** (Linnæus). Blue wild indigo.

CYTISUS Linnæus.

- * **C. scoparius** (Linnæus). Scotch broom.
Sterrett Township, P. R. R. embankment west of Swissvale,
June 19, 1889; C. C. Mellor.

LUPINUS Linnæus.

- † **L. perennis** Linnæus. Wild lupine.

TRIFOLIUM Linnæus.

- * **T. incarnatum** Linnæus. Crimson clover.
- * **T. arvense** Linnæus. Rabbit-foot clover.
Moon Township, dry woods near Sharon church, Sept., 1888-89.
Allegheny, Highwood Cemetery, July, 1896; John Ferguson.
- * **T. pratense** Linnæus. Red clover.
- * **T. reflexum** Linnæus. Buffalo clover.
Bellevue, "hillside, Ohio River, near Jack's Run, July, 1869";
Rev. S. W. Knipe.
Sewickley Township, branch of Turkey Foot Run, July, 1886.

† **T. stoloniferum** Muhlenberg. Running buffalo clover.

* **T. repens** Linnæus. White clover.

* **T. hybridum** Linnæus. Alsike clover.

* **T. agrarium** Linnæus. Hop-clover.

Chartiers Township, near Ingram Station, July, 1886; Alfred Stengle.

Patton Township, high dry hill, east of Pitcairn Station, August 15, 1900.

§ **T. procumbens** Linnæus. Low hop-clover.

MELILOTUS Jussieu.

* **M. officinalis** (Linnæus). Yellow sweet-clover.

* **M. alba** Desvaux. White sweet-clover.

MEDICAGO Linnæus.

* **M. sativa** Linnæus. Alfalfa.

* **M. lupulina** Linnæus. Hop medic.

CRACCA Linnæus.

TEPHROSIA Persoon.

* **C. Virginiana** Linnæus. Goat's-rue.

ROBINIA Linnæus.

* **R. Pseudacacia** Linnæus. Locust-tree.

* **R. hispida** Linnæus. Rose acacia.

Tarentum, roadside, escaped from garden, August, 1900.

ASTRAGALUS Linnæus.

- * **A. Carolinianus** Linnæus. Milk vetch.

A. Canadensis Linnæus.

Moon Township, Thorn Run road, near A. Brown's, July, 1895.

MEIBOMIA Adanson.*DESMODIUM* Desvaux.

- * **M. nudiflora** Linnæus. Naked-flowered tick-trefoil.

- † **M. grandiflora** Walter. Pointed-leaved tick-trefoil.

D. acuminatum De Candolle.

- † **M. pauciflora** (Nuttall). Few-flowered tick-trefoil.

- * **M. Michauxii** Vail. Prostrate tick-trefoil.

D. rotundifolium De Candolle.

- * **M. canescens** (Linnæus). Hoary tick-trefoil.

- † **M. bracteosa** (Michaux). Large-leaved tick-trefoil.

D. cuspidatum Hooker.

- † **M. viridiflora** (Linnæus). Velvet-leaved tick-trefoil.

- † **M. Dillenii** (Darlington). Dillen's tick-trefoil.

- * **M. paniculata** (Linnæus). Panicked tick-trefoil.

- † **M. Canadensis** (Linnæus). Showy tick-trefoil.

- † **M. rigida** (Elliott). Rigid tick-trefoil.

LESPEDEZA Michaux.

- * **L. repens** (Linnæus). Creeping bush-clover.

† **L. procumbens** Michaux. Trailing bush-clover.

* **L. violacea** (Linnæus). Bush-clover.

* **L. Virginica** (Linnæus). Slender bush-clover.

L. reticulata Persoon.

* **L. hirta** (Linnæus). Hairy bush-clover.

L. polystachya Michaux.

* **L. capitata** Michaux. Round-headed bush-clover.

Robinson Township, near Groveton Station, Oct. 10, 1899.

STYLOSANTHES Swartz.

§ **S. biflora** (Linnæus). Pencil-flower.

S. elatior Swartz.

VICIA Linnæus.

* **V. sativa** Linnæus. Common vetch.

† **V. Cracca** Linnæus. Tufted vetch.

* **V. Caroliniana** Walter. Carolina vetch.

† **V. Americana** Muhlenberg. American vetch.

LATHYRUS Linnæus.

† **L. palustris** Linnæus. Marsh vetchling.

APIOS Mœench.

* **A. Apios** (Linnæus). Ground-nut.

A. tuberosa Mœench.

FALCATA Gmelin.*AMPHICARPA* Elliott.

- * **F. comosa** (Linnæus). Wild pea-nut.

A. monoica Nuttall.

- * **F. Pitcheri** (Torrey & Gray). Pitcher's hog-nut.

CÆSALPINACEÆ Klotzsch & Garcke.

SENNA FAMILY. IV-47.

CERCIS Linnæus.

- * **C. Canadensis** Linnæus. Red-bud.

CASSIA Linnæus.

- * **C. Marylandica** Linnæus. Wild senna.

- * **C. Chamæcrista** Linnæus. Partridge pea.

- * **C. nictitans** Linnæus. Wild sensitive-plant.

GYMNOCLADUS Lamarck.

- † **G. dioica** (Linnæus). Kentucky coffee-tree.

G. Canadensis Lamarck.

GLEDITSIA Linnæus.

- * **G. triacanthos** Linnæus. Honey-locust.

DRUPACEAÆ De Candolle.

PLUM FAMILY. IV-45.

PRUNUS Linnæus.

- * **P. Americana** Marshall. Wild plum.

- * **P. domestica** Linnæus. Garden plum.

- * *P. pumila* Linnæus. Sand cherry.
- † *P. Pennsylvanica* (Linné). Wild red cherry.
- * *P. Virginiana* Linnæus. Choke cherry.
- † *P. demissa* (Nuttall). Western wild cherry.
- * *P. serotina* Ehrhart. Wild black cherry.
- * *P. Cerasus* Linnæus. Sour cherry.
- * *P. Avium* Linnæus. Sweet cherry.
- * *P. Padus* Linnæus. European bird cherry.
Pittsburgh, spontaneous on the Southside hills, 32d Ward.

AMYGDALUS Linnæus.

- * *A. Persica* Linnæus. Peach.
Spontaneous throughout the county.

ROSACEÆ B. Jussieu.

ROSE FAMILY. IV-43.

SPIRÆA Linnæus.

- * *S. salicifolia* Linnæus. Willow-leaved meadow-sweet.
- * *S. tomentosa* Linnæus. Hardhack.
Harrison Township, wet roadside, John Potts', June, 1895.
- * *S. sorbifolia* Linnæus. Ash-leaved spiræa.
Moon Township, escaped to roadsides, Narrows Run, June, 1897.

- * **S. Virginiana** Britton. Virginia spiræa.
O'Hara Township, head of Darlington's Hollow, July 7, 1900;
W. N. Miller.

ARUNCUS Adanson.

- * **A. Aruncus** (Linnæus). Goat's-beard.
Spiræa Aruncus Linnæus.

ULMARIA Hill.

- † **U. rubra** Hill. Queen of the prairie.
Spiræa lobata Gronovius.

OPULASTER Medicus.

PHYSOCARPUS Maximowicz.

- * **O. opulifolius** (Linnæus). Ninebark.
P. opulifolius Maximowicz.

PORTERANTHUS Britton.

GILLENIA Mœnch.

- * **P. trifolius** (Linnæus). Indian physic.
G. trifoliata Mœnch.
- * **P. stipulatus** (Muhlenberg). American ipecac.
G. stipulacea Mœnch.
Moon Township, woods, McKee property, June, 1898.

RUBUS Linnæus.

- * **R. odoratus** Linnæus. Thimble-berry.
- * **R. strigosus** Michaux. Wild red raspberry.
Tarentum, foot of island, July, 1900.
- * **R. occidentalis** Linnæus. Black raspberry.
A yellow-fruited variety occurs in Moon Township, near Carnot.

- * **R. Americanus** (Persoon). Dwarf raspberry.
R. triflorus Richards.
- * **R. villosus** Aiton. High bush blackberry.
- § **R. Alleghaniensis** Porter. Mountain blackberry.
- * **R. hispidus** Linnæus. Running swamp blackberry.
Harrison Township, swamp below Joseph Johnston's house, July,
1897.
- * **R. Canadensis** Linnæus. Dewberry.

DALIBARDA Linnæus.

- † **D. repens** Linnæus. Dalibarda.

GEUM Linnæus.

- * **G. Canadense** Jacquin. White avens.
G. album Gmelin.
- † **G. Virginianum** Linnæus. Rough avens.
- * **G. strictum** Aiton. Yellow avens.
Hampton Township, ditches, P. & W. R. R., north of Semple
Station, Aug. 10th, 1900.
- * **G. vernum** (Rafinesque). Spring avens.

WALDSTEINIA Willdenow.

- * **W. fragarioides** (Michaux). Barren strawberry.

FRAGARIA Linnæus.

- † **F. Virginiana** Duchesne. Scarlet strawberry.
- † **F. vesca** Linnæus. European wood strawberry.

- * **F. Americana** (Porter). American wood strawberry.

A form with "white" fruit from Moon Township seems to belong here.

POTENTILLA Linnæus.

- * **P. arguta** Pursh. Tall cinquefoil.

Robison Township, near Groveton, July 20, 1898.

Moon Township, Barns' Farm, near Stoop's Ferry, August, 1899.

- * **P. Monspeliensis** Linnæus. Rough cinquefoil.

P. Norvegica Linnæus.

- † **P. intermedia** Linnæus. Downy cinquefoil.

- * **P. recta** Linnæus. Rough fruited cinquefoil.

Allegheny, Campus Western University of Pennsylvania, August, 1900.

- * **P. Canadensis** Linnæus. Five-finger.

- * **P. pumila** Poiret. Dwarf five-finger.

AGRIMONIA Linnæus.

- * **A. hirsuta** Muhlenberg. Common agrimony.

A. Eupatoria Linnæus.

- * **A. parviflora** Solander. Small-flowered agrimony.

SANGUISORBA Linnæus.

POTERIUM Linnæus.

- * **S. Canadensis** Linnæus. Canadian burnet.

Harrison Township, Little Bull Creek, near Tarentum "Water-works," August 30, 1892, Dr. A. Koenig. August, 1896, J. A. Shafer.

ROSA Linnæus.

- * **R. setigera** Michaux. Climbing rose.
Harrison Township, McWilliams' Hollow, July, 1895.
O'Hara Township, roadside east of Aspinwall, June, 1900.
- ? **R. blanda** Aiton. Smooth rose.
- * **R. Carolina** Linnæus. Swamp rose.
- * **R. humilis** Marshall. Low pasture rose.
- * **R. humilis lucida** (Ehrhart). Pasture rose.
R. lucida Ehrhart.
- † **R. canina** Linnæus. Dog rose.
- * **R. rubiginosa** Linnæus. Sweetbrier.

POMACEÆ Linnæus.

APPLE FAMILY. IV-44.

PYRUS Linnæus.

- * **P. communis** Linnæus. Choke-pear.
Occasionally in margin of woods, Moon Township, etc.

MALUS Jussieu.*PYRUS* Linnæus.

- * **M. coronaria** (Linnæus). American crab-apple.
- * **M. angustifolia** (Aiton). Narrow leaved crab-apple.
South Fayette, near Herriottsville, May, 1871, May 15, 1900,
Rev. S. W. Knipe.
- * **M. Malus** (Linnæus). Apple.
Frequently escaped to woods and thickets.

SORBUS Linnæus.*PYRUS* Linnæus.

- * **S. sambucifolia** Chamisso & Schlechtendahl. Western mountain-ash.

Pittsburgh, 18th Ward, rear of cemetery, June, 1885.

“ Haight’s Run, July, 1899.

ARONIA Linnæus.*PYRUS* Linnæus.

- * **A. nigra** (Willdenow). Black choke-berry.

Harrison Township, “ Bird’s Hollow,” near Natrona, June, 1895.

CRATÆGUS Linnæus.

- * **C. Oxyacantha** Linnæus. English hawthorn.

† **C. coccinea** Linnæus. Scarlet haw.

† **C. macrantha** Loddiges. Long-spined thorn.

* **C. mollis** (Torrey & Gray). Red-fruited haw.

* **C. tomentosa** Linnæus. Pear haw.

* **C. punctata** Jacquin. Large-fruited haw.

* **C. Crus-Galli** Linnæus. Cockspur thorn.

AMELANCHIER Medicus.

* **A. Canadensis** (Linnæus). Service-berry.

* **A. Botryapium** (Linné). Shad-bush.

* **A. spicata** (Lamarck). Low June-berry.

Allegheny, Highwood Cemetery, on rocky hill, May, 1898, John Ferguson.

SAXIFRAGACEÆ Dumortier.

SAXIFRAGE FAMILY. IV-39.

SAXIFRAGA Linnæus.

- * **S. Virginiensis** Michaux. Early saxifrage.

- * **S. Pennsylvanica** Linnæus. Swamp saxifrage.
Pine Township, swamp west of Wexford. June, 1896.

TIARELLA Linnæus.

- * **T. cordifolia** Linnæus. Coolwort.
Pittsburgh, "Homewood Hollow," May, 1896.

HEUCHERA Linnæus.

- * **H. Americana** Linnæus. Alum-root.

MITELLA Tournefort.

- * **M. diphylla** Linnæus. Mitrewort.

CHRYSOSPLENIUM Linnæus.

- * **C. Americanum** Schweinitz. Water carpet.
Harrison Township, borders of Little Bull Creek, May 3, 1893,
Dr. Adolph Koenig; May, 1900, J. A. Shafer.

HYDRANGEA Linnæus.

- * **H. arborescens** Linnæus. Wild hydrangea.

PHILADELPHUS Linnæus.

- * **P. coronarius** Linnæus. Mock orange.
Occasionally escaped from gardens.

GROSSULARIACEÆ Dumortier.

GOOSEBERRY FAMILY. IV-40.

RIBES Linnæus.

* **R. Cynosbati** Linnæus. Wild gooseberry.

† **R. oxyacanthoides** Linnæus. Northern gooseberry.

* **R. Uva-crispa** Linnæus. Garden gooseberry.

R. Grossularia Linnæus.

Occasionally escaped.

* **R. floridum** L'Heritier. Wild black currant.

* **R. rubrum** Linnæus. Red currant.

Occasionally escaped.

CRASSULACEÆ De Candolle.

ORPINE FAMILY. IV-38.

SEDUM Linnæus.

|| **S. Telephium** Linnæus. Live-forever.

Moon Township, roadside west of Carnot.

† **S. acre** Linnæus. Yellow stonecrop.

* **S. ternatum** Michaux. Wild stonecrop.

PENTHORUM Linnæus.

* **P. sedoides** Linnæus. Ditch stonecrop.

DROSERACEÆ S. F. Gray.

SUNDEW FAMILY. IV-36.

DROSERA Linnæus.

§ **D. rotundifolia** Linnæus. Round-leaved sundew.

HAMAMELIDACEÆ Lindley.

WITCH-HAZEL FAMILY. IV-41.

HAMAMELIS Linnæus.

- * **H. Virginiana** Linnæus. Witch-hazel.

HALORAGIDACEÆ Klotzsch & Garcke.

WATER-MILFOIL FAMILY. IV-89.

MYRIOPHYLLUM Linnæus.

- † **M. verticillatum** Michaux. Water-milfoil.

LYTHRACEÆ Lindley.

LOOSESTRIFE FAMILY. IV-85.

LYTHRUM Linnæus.

- * **L. alatum** Pursh. Winged loosestrife.
East Deer Township, Kennedy Station, July, 1890, Dr. Adolph Koenig.
Hampton Township, bottom of old milldam, Semple Station, August 10, 1900.
- * **L. Salicaria** Linnæus. Purple loosestrife.
Allegheny, Highwood Cemetery, escaped: John Ferguson.

PARSONSIA Patrick Browne.**CUPHEA** Patrick Browne.

- * **P. petiolata** (Linnæus). Clammy cuphea.
C. viscosissima Jacquin.

ONAGRACEÆ Dumortier.

EVENING-PRIMROSE FAMILY. IV-87.

LUDWIGIA Linnæus.

- * **L. alternifolia** Linnæus. Seed-box.

ISNARDIA Linnæus.*LUDWIGIA* Linnæus.

- * **I. palustris** Linnæus. Water-purslane.

EPILOBIUM Linnæus.

- * **E. coloratum** Muhlenberg. Purple-leaved willow-herb.

CHAMÆNERION Adanson.

- * **C. angustifolium** (Linnæus). Great willow-herb.

ONAGRA Adanson.*ÆNOTHERA* Linnæus.

- * **O. biennis** (Linnæus). Evening-primrose.

KNEIFFIA Spach.*ÆNOTHERA* Linnæus.

- * **K. pumila** (Linnæus). Small sun-drops.

- * **K. fruticosa** (Linnæus). Sun-drops.

GAURA Linnæus.

- * **G. biennis** Linnæus. Biennial gaura.

McKees Rocks, near the Indian Mound, August, 1896. C. C. Mellor.

CIRCÆA Linnæus.

- * **C. Lutetiana** Linnæus. Enchanter's nightshade.

- § **C. alpina** Linnæus. Smaller enchanter's nightshade.

PASSIFLORACEÆ Dumortier.

PASSION-FLOWER FAMILY. IV-80.

PASSIFLORA Linnæus.

- * **P. lutea** Linnæus. Yellow passion-flower.

UMBELLIFERÆ B. Jussieu.

CARROT FAMILY. IV-91.

DAUCUS Linnæus.

- * **D. Carota** Linnæus. Wild carrot.

ANGELICA Linnæus.

- * **A. villosa** (Walter). Pubescent angelica.
A. hirsuta Muhlenberg.

OXYPOLIS Rafinesque.**TIEDEMANNIA** De Candolle.

- § **O. rigidus** (Linnæus). Cow-bane.

HERACLEUM Linnæus.

- * **H. lanatum** Michaux. Cow-parsnip.

PASTINACA Linnæus.

- * **P. sativa** Linnæus. Wild parsnip.

THASPIUM Nuttall.

- * **T. barbinode** (Michaux). Hairy-jointed meadow-parsnip.
Pittsburgh, hillside above Salt-works Station, June 17, 1898.

FÆNICULUM Adanson.

- * **F. Fœniculum** (Linnæus). Fennel.
F. officinale Allioni.

O'Hara Township, W. P. R. R. embankment near Squaw Run,
July, 1900.

ANETHRUM Linnæus.

- * **A. graveolens** Linnæus.
Moon Township, roadside, Narrows Run, July, 1889.

PIMPINELLA Linnæus.

- * **P. integerrima** (Linnæus). Yellow pimpernel.

DERINGA Adanson.*CRYPTOTÆNIA* De Candolle.

- * **D. Canadensis** (Linnæus). Honewort.

SIUM Linnæus.

- † **S. cicutæfolium** Gmelin. Water-parsnip.

ZIZIA Koch.

- * **Z. aurea** (Linnæus). Golden meadow-parsnip.

- * **Z. cordata** (Walter). Heart-leaved Alexanders.

CICUTA Linnæus.

- * **C. maculata** Linnæus. Spotted water-hemlock.

CONIUM Linnæus.

- * **C. maculatum** Linnæus. Poison hemlock.

CHÆROPHYLLUM Linnæus.

- * **C. procumbens** (Linnæus). Spreading chervil.

O'Hara Township, woods below railroad, near Aspinwall, May,
1900.

WASHINGTONIA Rafinesque.*OSMORRHIZA* Rafinesque.

- * **W. Claytoni** (Michaux). Woolly sweet-cicely.
O. brevistylis De Candolle.

- * **W. longistylis** (Torrey). Sweet-cicely.

ERIGENIA Nuttall.

- § **E. bulbosa** (Michaux). Harbinger of spring.

HYDROCOTYLE Linnæus.

- * **H. Americana** Linnæus. Marsh-pennywort.
Sterrett Township, near Edgewood, May, 1886, C. C. Mellor.

SANICULA Linnæus.

- * **S. Marylandica** Linnæus. Black sanicle.
* **S. Canadensis** Linnæus. Short-styled sanicle.

ARALIACEÆ Ventenat.

GINSENG FAMILY. IV-90.

ARALIA Linnæus.

- * **A. spinosa** Linnæus. Angelica tree.
* **A. racemosa** Linnæus. Spikenard.
* **A. nudicaulis** Linnæus. Wild sarsaparilla.

PANAX Linnæus.

- * **P. quinquefolium** Linnæus. Ginseng.
§ **P. trifolium** Linnæus. Dwarf ginseng.

CORNACEÆ Link.

DOG-WOOD FAMILY. IV-92.

CORNUS Linnæus.

- * **C. florida** Linnæus. Flowering dog-wood.
† **C. circinata** L'Heritier. Round-leaved cornel.

- * **C. Amonum** Miller. Silky cornel.
C. sericea Linnæus.
- * **C. stolonifera** Michaux. Red-osier cornel.
- * **C. candidissima** Marshall. Panicked cornel.
C. paniculata L'Heritier.

NYSSA Linnæus.

- * **N. sylvatica** Marshall. Sour gum.

CAPRIFOLIACEÆ Ventenat.

HONEYSUCKLE FAMILY. V-35.

SAMBUCUS Linnæus.

- * **S. Canadensis** Linnæus. American elder.
- * **S. pubens** Michaux. Red-berried elder.

VIBURNUM Linnæus.

- § **V. alnifolium** Marshall. Hobble-bush.
V. lantanoides Michaux.
- * **V. acerifolium** Linnæus. Maple-leaved arrow-wood.
- * **V. pubescens** (Aiton). Downy arrow-wood.
Pittsburgh, Butler street, beyond Morningside Road, June, 1884.
- § **V. dentatum** Linnæus. Arrow-wood.
- * **V. Lentago** Linnæus. Sweet viburnum.
Fawn Township, Little Bull Creek, at branch to Donaldville,
June, 1896.
- * **V. prunifolium** Linnæus. Black haw.

TRIOSTEUM Linnæus.

- * **T. perfoliatum** Linnæus. Horse-gentian.

SYMPHORICARPOS Jussieu.

- * **S. racemosus** Michaux. Snowberry.
Only as an escaped species with us.
- * **S. Symphoricarpos** (Linnæus). Coral-berry.
S. vulgaris Michaux.
Escaped from old gardens.

LONICERA Linnæus.

- * **L. glaucescens** Rydberg. Douglas' honeysuckle.
Moon Township, Wm. Tomlinson's woods, May, 1897.
- * **L. sempervirens** Linnæus. Trumpet honeysuckle.
Harrison Township, McWilliams' Hollow, near Natrona, June,
1895.
- * **L. Japonica** Thunberg. Japanese honeysuckle.
Occasionally escaped.
- * **L. ciliata** Muhlenberg. American fly-honeysuckle.
Shaler Township, near P. and W. R. R. tunnel, May, 1886.

DIERVILLA Mœench.

- * **D. Diervilla** (Linnæus). Bush honeysuckle.
D. trifida Mœench.
Hulton, "on river bank, 1888," Dr. Adolph Koenig.

RUBIACEÆ B. Jussieu.

MADDER FAMILY. V-34.

HOUSTONIA Linnæus.

- * **H. cœrulea** Linnæus. Bluets.

- * **H. ciliolata** Torrey. Fringed houstonia.
North Versailles Township, near Wall's Station, July, 1869; Rev.
S. W. Knipe.
North Versailles Township, near Wall's Station, May 10, 1891;
Thos. Seal.
- * **H. longifolia** Gaertner. Long-leaved houstonia.
Sewickley Township, dry hills, Turkey-foot Run, June, 1885.
Moon Township, T. A. Shafer farm, June, 1886.

CEPHALANTHUS Linnæus.

- * **C. occidentalis** Linnæus. Button-bush.

MITCHELLA Linnæus.

- * **M. repens** Linnæus. Partridge-berry.

GALIUM Linnæus.

- † **G. Aparine** Linnæus. Cleavers.
- * **G. pilosum** Aiton. Hairy bedstraw.
- * **G. lanceolatum** Torrey. Torrey's wild licorice.
- * **G. circæzans** Michaux. Wild licorice.
- * **G. boreale** Linnæus. Northern bedstraw.
- † **G. trifidum** Linnæus. Small bedstraw.
- † **G. concinnum** Torrey & Gray. Shining bedstraw.
- † **G. triflorum** Michaux. Fragrant bedstraw.

VALERIANACEÆ Batsch.

VALERIAN FAMILY. V-37.

VALERIANA Linnæus.

- * **V. pauciflora** Michaux. Large-flowered valerian.

- * **V. officinalis** Linnæus. Garden valerian.

Sterrett Township, woods near Edgewood, July, 1897, C. C. Mellor.

VALERIANELLA Pollich.

- * **V. Locusta** (Linnæus). European corn-salad.

V. olitoria Pollich.

- * **V. chenopodifolia** (Pursh). Goose-foot corn-salad.

V. fagopyrum Torrey & Gray.

South Fayette Township, near Herriottsville, May, 1871, and May 15, 1900, Rev. S. W. Knipe.

- * **V. radiata** (Linnæus). Beaked corn-salad.

O'Hara Township, Squaw Run, June, 1900.

DIPSACACEÆ Lindley.

TEASEL FAMILY. V-38.

DIPSACUS Linnæus.

- * **D. sylvestris** Hudson. Wild teasel.

CUCURBITACEÆ B. Jussieu.

GOURD FAMILY. V-39.

SICYOS Linnæus.

- * **S. angulatus** Linnæus. One-seeded bur-cucumber.

MICRAMPELIS Rafinesque.*ECHINO CYSTIS* Torrey & Gray.

- * **M. lobata** (Michaux). Wild balsam-apple.

COMPOSITÆ Adanson.

THISTLE FAMILY. V-43.

VERNONIA Schreber.

- * **V. Noveboracensis** (Linnæus). New York iron-weed.

- † **V. gigantea** (Walter). Tall iron-weed.

EUPATORIUM Linnæus.

- * **E. maculatum** Linnæus. Spotted Joe-Pye weed.

- † **E. purpureum** Linnæus. Purple boneset.

- * **E. Torreyanum** Short. Torrey's boneset.
Fawn Township, Pine Hill, July, 1900.

- * **E. sessilifolium** Linnæus. Upland boneset.

- † **E. rotundifolium** Linnæus. Round-leaved thoroughwort.

- * **E. perfoliatum** Linnæus. Boneset.

- * **E. ageratoides** (Linné). White snake-root.

- † **E. aromaticum** Linnæus. Smaller white snake-root.

- * **E. cælestinum** Linnæus. Mist-flower.

LACINARIA Hill.*LIATRIS* Schreber.† **L. squarrosa** (Linnæus). Colic-root.**SOLIDAGO** Linnæus.* **S. squarrosa** Muhlenberg. Stout ragged golden-rod.* **S. cæsia** Linnæus. Woodland golden-rod.* **S. flexicaulis** Linnæus. Zig-zag golden-rod.*S. latifolia* Linnæus.* **S. bicolor** Linnæus. Silver-rod.* **S. rugosa** Miller. Wrinkled golden-rod.* **S. patula** Muhlenberg. Spreading golden-rod.

Avalon, branch of Spruce Run, near stone bridge, September, 1896, James Semple.

O'Hara Township, swamp near Allegheny City Poor Farm, October, 1899.

* **S. ulmifolia** Muhlenberg. Elm-leaved golden-rod.† **S. neglecta** Torrey & Gray. Swamp golden-rod.* **S. juncea** Aiton. Early golden-rod.† **S. arguta** Aiton. Cut-leaved golden-rod.† **S. rupestris** Rafinesque. Rock golden-rod.* **S. serotina** Aiton. Late golden-rod.

† *S. serotina gigantea* (Aiton). Tall late golden-rod.

* *S. Canadensis* Linnæus. Canada golden-rod.

* *S. nemoralis* Aiton. Field golden-rod.

EUTHAMIA Nuttall.

SOLIDAGO Linnæus.

* *E. graminifolia* (Linnæus). Bushy golden-rod.

S. lanceolata Linnæus.

SERIOCARPUS Nees.

* *S. asteroides* (Linnæus). White-topped aster.

S. conyzoides Nees.

ASTER Linnæus.

* *A. divaricatus* Linnæus. White wood aster.

A. corymbosus Aiton.

* *A. glomeratus* (Nees). Bernhardt's aster.

* *A. macrophyllus* Linnæus. Large-eaved aster.

* *A. Shortiooker*. Short's aster.

* *A. azureus* Lindley. Sky-blue aster.

* *A. cordifolius* Linnæus. Common blue aster.

* *A. Lowrieanus* Porter. Lowrie's aster.

* *A. sagittifolius* Willdenow. Arrow-leaved aster.

* *A. undulatus* Linnæus. Wavy-leaved aster.

- * **A. patens** Aiton. Late purple aster.
- † **A. phlogifolius** Muhlenberg. Thin-leaved purple aster.
- * **A. Novæ-Angliæ** Linnæus. New England aster.
- * **A. oblongifolius** Nuttall. Aromatic aster.
- † **A. amethystinus** Nuttall. Amethyst aster.
- * **A. puniceus** Linnæus. Red-stalked aster.
- * **A. prenanthoides** Muhlenberg. Crooked-stemmed aster.
- * **A. lævis** Linnæus. Smooth aster.
- * **A. dumosus** Linnæus. Bushy aster.
- * **A. salicifolius** Aiton. Willow aster.
- * **A. paniculatus** Lamarck. Tall white aster.
- * **A. Tradescanti** Linnæus. Michaelmas daisy.
- * **A. ericoides** Linnæus. White heath aster.
- * **A. lateriflorus** (Linnæus). Starved aster.
A. diffusus Aiton.
- * **A. hirsuticaulis** Lindley. Hairy-stemmed aster.
McCandless Township, Perrysville Road, October, 1896.
- * **A. vimineus** Lamarck. Small white aster.

- * **A. multiflorus** Aiton. White wreath aster.

DÖELLINGERIA Nees.

ASTER Linnæus.

- * **D. umbellata** (Miller). Flat-top aster.
Springdale Township, near Robert Stewart's, September, 1896.
- * **D. infirma** (Michaux). Cornel-leaved aster.

IONACTIS Greene.

ASTER Linnæus.

- § **I. linariifolius** (Linnæus). Stiff-leaved aster.

ERIGERON Linnæus.

- * **E. annuus** Linnæus White-top.
- * **E. ramosus** (Walter). Daisy fleabane.
E. strigosus Muhlenberg.
- * **E. pulchellus** Michaux. Robin's plantain.
E. bellidifolius Muhlenberg.
- * **E. Philadelphicus** Linnæus. Philadelphia fleabane.

LEPTILON Rafinesque.

ERIGERON Linnæus.

- * **L. Canadense** (Linnæus). Canada fleabane.

GIFOLA Cassini.

FILAGO Linnæus.

- * **G. Germanica** (Linnæus). Cottonrose.
Fawn Township, Bull Creek, on dry hill near Tarentum, July,
1886.

ANTENNARIA Gærtner.

- * **A. neodioica** Greene. Small cat's-foot.
Sewickley Township, dry hill near Turkey-foot Run, July, 1886.
Moon Township, T. A. Shafer heirs' farm, June, 1887.
- † **A. neglecta** Greene. Field cat's-foot.
- * **A. plantaginifolia** (Linnæus). Plantain-leaf everlasting.

ANAPHALIS DeCandolle.

- * **A. margaritacea** (Linnæus). Pearly everlasting.
Moon Township, Flaugherty Run, on Phillips' place, August,
1898, Hugo Roste.

GNAPHALIUM Linnæus.

- * **G. obtusifolium** Linnæus. Life everlasting.
G. polycephalum Michaux.
- * **G. decurrens** Ives. Winged cudweed.
Moon Township, old field in McKee tract, September 15, 1894.
- * **G. uliginosum** Linnæus. Low cudweed.
- * **G. purpureum** Linnæus. Purplish cudweed.

INULA Linnæus.

- * **I. Helenium** Linnæus. Elecampane.

CALENDULA Linnæus.

- * **C. officinalis** Linnæus. Garden marigold.
Sewickley Township, roadside, Turkey-foot Run Road, October
7, 1886.

POLYMNIA Linnæus.

- * **P. Canadensis** Linnæus. Smaller leaf-cup.
Baldwin Township, hillside, east of Baldwin Station, August,
1886, Alfred Stengel.
- * **P. Uvedalia** Linnæus. Larger leaf-cup.

SILPHIUM Linnæus.

- * **S. laciniatum** Linnæus. Compass-plant.
Allegheny, spontaneous in Highwood Cemetery.
- * **S. trifoliatum** Linnæus. Whorled rosin-weed.

ECLIPTA Linnæus.

- * **E. alba** (Linnæus). Eclipta.
Pittsburgh, Allegheny wharf, near Third St., Aug. 15, 1884.

HELIOPSIS Persoon.

- * **H. helianthoides** (Linnæus). Ox-eye.
H. levis Persoon.

BRAUNERIA Necker.**ECHINACEA** Mœnch.

- * **B. pallida** Nuttall. Purple cone-flower.
E. angustifolia De Candolle.
Sterrett Township, near Brushton, June 20, 1887. C. C. Mellor.

RUDBECKIA Linnæus.

- * **R. laciniata** Linnæus. Tall cone-flower.
- * **R. hirta** Linnæus. Yellow cone-flower.

- * **R. fulgida** Aiton. Orange cone-flower.

Fawn Township, branch of Bull Creek, near Thomas Dickson's,
June, 1895.

RATIBIDA Rafinesque.

LEPACHYS Rafinesque.

- * **R. pinnata** (Ventenat). Gray-headed cone-flower.

L. pinnata Torrey & Gray.

Moon Township, Flaugherty Run, on Phillips' place, August,
1898, Hugo Roste.

HELIANTHUS Linnæus.

- * **H. annuus** Linnæus. Common sunflower.

- * **H. mollis** Lamarck. Hairy sunflower.

- * **H. giganteus** Linnæus. Tall sunflower.

- * **H. Maximiliani** Schrader. Maximilian's sunflower

- * **H. grosse-serratus** Martens. Saw-tooth sunflower.

- * **H. microcephalus** Torrey & Gray. Small sunflower.

H. parviflorus Bernhardt.

- † **H. doronicoides** Lamarck. Oblong-leaved sunflower.

- * **H. divaricatus** Linnæus. Woodland sunflower.

- * **H. hirsutus** Rafinesque. Stiff-haired sunflower.

- * **H. strumosus** Linnæus. Pale-leaved sunflower.

- * **H. trachelifolius** Linnæus. Throatwort sunflower.

* **H. decapetalus** Linnæus. Thin-leaved sunflower.

* **H. tuberosus** Linnæus. Jerusalem artichoke.

VERBESINA Linnæus.

ACTINOMERIS Nuttall.

* **V. alternifolia** (Linnæus). Golden star.

A. squarrosa Nuttall.

COREOPSIS Linnæus.

* **C. tripteris** Linnæus. Tall tickseed.

BIDENS Linnæus.

* **B. frondosa** Linnæus. Beggar-ticks.

† **B. connata** Muhlenberg. Purple-stemmed beggar-ticks.

† **B. cernua** Linnæus. Small bur-marigold.

* **B. lævis** (Linnæus). Large bur-marigold.

B. chrysanthemoides Michaux.

* **B. bipinnata** Linnæus. Spanish needles.

GALINSOGA Ruiz & Pavon.

* **G. parviflora** Cavanilles. Galinsoga.

HELENIUM Linnæus.

* **H. autumnale** Linnæus. Sneezeweed.

ANTHEMIS Linnæus.

* **A. Cotula** Linnæus. Mayweed.

ACHILLEA Linnæus.

- * **A. Millefolium** Linnæus. Yarrow.

CHRYSANTHEMUM Linnæus.

- * **C. Leucanthemum** Linnæus. Ox-eye daisy.
- * **C. Parthenium** Persoon. Feverfew.
Moon Township, roadside near Carnot, July, 1898.

TANACETUM Linnæus.

- * **T. vulgare** Linnæus. Tansy.

ARTEMISIA Linnæus.

- * **A. Absinthium** Linnæus. Wormwood.
About old gardens.
- * **A. Abrotanum** Linnæus. Southernwood.
Pittsburgh, A. V. R. R., near Morningside, September, 1888,
Dr. Ziegler.
- * **A. biennis** Willdenow. Biennial wormwood.
Pittsburgh, Butler St., near 56th St., August, 1885.
Allegheny, Brighton Road. October, 1889.

SENECIO Linnæus.

- † **S. vulgaris** Linnæus. Common groundsel.
- * **S. aureus** Linnæus. Golden ragwort.
- * **S. Balsamitæ** Muhlenberg. Balsam groundsel.

SYNOSMA Rafinesque.**CACALIA** Linnæus.

- * **S. suaveolens** (Linnæus). Sweet-scented Indian plantain.

MESADENIA Rafinesque.*CACALIA* Linnæus.

- * **M. reniformis** (Muhlenberg). Great Indian plantain.

- * **M. atriplicifolia** (Linnæus). Pale Indian plantain.

ERECHTITES Rafinesque.

- * **E. hieracifolia** (Linnæus). Fireweed.

ARCTIUM Linnæus.

- † **A. Lappa** Linnæus. Great burdock.

- * **A. minus** Schkuhr. Common burdock.

CARDUUS Linnæus.*CNICUS* Tournefort.

- * **C. lanceolatus** Linnæus. Common thistle.

- * **C. altissimus** Linnæus. Roadside thistle.

- * **C. discolor** (Muhlenberg). Field thistle.

- * **C. odoratus** (Muhlenberg). Pasture thistle.

Fawn Township, roadside, Josiah Painter's place, July, 1895

- * **C. muticus** (Michaux). Swamp thistle.

Hampton Township, north of Wildwood Station, July, 1887, Dr.
Adolph Koenig; August, 1890, J. A. S.

- * **C. arvensis** (Linnæus). Canada thistle.

ONOPORDON Linnæus.

- * **O. Acanthium** Linnæus. Cotton thistle.

Pittsburg, W. Carson St., near city lines, July, 1889-98.

CENTAUREA Linnæus.

- * **C. Cyanus** Linnæus. Corn-flower.
Harrison and Moon Townships; escaped from gardens.

AMBROSIACEÆ Reichenbach.

RAGWEED FAMILY. V-42.

AMBROSIA Linnæus.

- * **A. trifida** Linnæus. Great ragweed.
- * **A. trifida integrifolia** (Muhlenberg). Entire-leaved great ragweed.
- * **A. artemisiæfolia** Linnæus. Ragweed.

XANTHIUM Linnæus.

- * **X. strumarium** Linnæus. Burweed.

CICHORIACEÆ Reichenbach.

CHICORY FAMILY. V-41.

ADOPOGON Necker.*KRIGIA* Schreber.

- * **A. Virginicum** (Linnæus). Virginia goatsbeard.
K. amplexicaulis Nuttall.

CICHORIUM Linnæus.

- * **C. Intybus** Linnæus. Chicory.

HIERACIUM Linnæus.

- † **H. Canadense** Michaux. Canada hawkweed.
- * **H. paniculatum** Linnæus. Panicked hawkweed.
- * **H. venosum** Linnæus. Rattlesnake-weed.

* **H. scabrum** Michaux. Rough hawkweed.

† **H. Gronovii** Linnæus. Hairy hawkweed.

NABALUS Cassini.

PRENANTHES Linnæus.

† **N. crepidineus** (Michaux). Corymbed rattlesnake-root.

* **N. albus** (Linnæus). White rattlesnake-root.

* **N. serpentarius** (Pursh). Lion's-foot.

* **N. altissimus** (Linnæus). Tall white lettuce.

† **N. trifoliatum** Cassini. Tall rattlesnake-root.

TARAXACUM Haller.

* **T. Taraxacum** (Linnæus). Common dandelion.

T. officinale Weber.

§ **T. erythrospermum** Andrzejewski. Red-seeded dandelion.

LACTUCA Linnæus.

* **L. Scariola** Linnæus. Prickly lettuce.

* **L. Canadensis** Linnæus. Wild lettuce.

* **L. sagittifolia** Elliott. Arrow-leaved lettuce.

L. integrifolia Bigelow.

* **L. hirsuta** Muhlenberg. Hairy wood-lettuce.

* **L. villosa** Jacquin. Hairy blue lettuce.

L. acuminata A. Gray.

- * **L. spicata** (Lamarck). Tall blue lettuce.
L. leucophæa. A. Gray.

SONCHUS Linnæus.

- * **S. oleraceus** Linnæus. Sow-thistle.
- * **S. asper** (Linnæus). Spiny sow-thistle.

CAMPANULACEÆ Jussieu.

BELL-FLOWER FAMILY. V-40.

CAMPANULA Linnæus.

- ? **C. rotundifolia** Linnæus. Harebell.
- * **C. aparinoides** Pursh. Marsh bell-flower.
Hulton, on river-bank, August, 1888, Dr. Adolph Koenig. Har-
rison Township, swamp below Joseph Johnston's house, August,
1900.
- * **C. Americana** Linnæus. Tall bell-flower.

LEGOUZIA Durand.

SPECULARIA Heister.

- * **L. perfoliata** (Linnæus). Venus' looking-glass.

LOBELIA Linnæus.

- * **L. cardinalis** Linnæus. Cardinal-flower.
Pittsburg, Glenwood Grove, near river bank, Sept., 1882; Har-
rison Township, woods of Henry Boyd's heirs, Sept., 1900.
- * **L. syphilitica** Linnæus. Great lobelia.
- * **L. spicata** Lamarck. Spiked lobelia.
- * **L. inflata** Linnæus. Indian tobacco.

VACCINIACEÆ Lindley.

HUCKLEBERRY FAMILY. V-5.

GAYLUSSACIA Humboldt, Bonpland, & Kunth.

- * **G. resinosa** (Aiton). Black huckleberry.

VACCINIUM Linnæus.

- * **V. stamineum** Linnæus. Deerberry.

- † **V. corymbosum** Linnæus. Tall blueberry.

- † **V. vacillans** Kalm. Low blueberry.

- * **V. Pennsylvanicum** Lamarck. Dwarf blueberry.

ERICACEÆ DeCandolle.

HEATH FAMILY. V-4.

EPIGÆA Linnæus.

- * **E. repens** Linnæus. Trailing arbutus.

GAULTHERIA Linnæus.

- * **G. procumbens** Linnæus. Wintergreen.

XOLISMA Rafinesque.**ANDROMEDA** Linnæus.

- * **X. ligustrina** (Linnæus). Andromeda.
Pine Township. Creek near Wexford, June, 1886.

OXYDENDRUM De Candolle.

- § **O. arboreum** (Linnæus). Sorrel-tree.

KALMIA Linnæus.

- * **K. latifolia** Linnæus. Mountain laurel.

RHODODENDRON Linnæus.

- * **R. maximum** Linnæus. Great laurel.

AZALEA Linnæus.

- * **A. nudiflora** Linnæus. Wild honeysuckle.

- * **A. arborescens** Pursh. Tree azalea.

PYROLACEÆ Agardh.

WINTERGREEN FAMILY. V-2.

CHIMAPHILA Pursh.

- * **C. umbellata** (Linnæus). Pipsissewa.

- * **C. maculata** (Linnæus). Spotted wintergreen.

PYROLA Linnæus.

- † **P. chlorantha** Swartz. Greenish-flowered wintergreen.

- * **P. elliptica** Nuttall. Shin-leaf.

- * **P. rotundifolia** Linnæus. Round-leaved wintergreen.

MONOTROPACEÆ Lindley.

INDIAN-PIPE FAMILY. V-3.

MONOTROPA Linnæus.

- * **M. uniflora** Linnæus. Indian-pipe.

HYPOPITYS Adanson.

- * **H. Hypopitys** (Linnæus). Pine-sap.
Moon Township, McKee tract, July, 1887.

PRIMULACEÆ Ventenat.

PRIMROSE FAMILY. V-7.

TRIENTALIS Linnæus.

- † **T. Americana** Pursh. Star-flower.

STEIRONEMA Rafinesque.

- * **S. ciliatum** (Linnæus). Fringed loosestrife.

LYSIMACHIA Linnæus.

- * **L. quadrifolia** Linnæus. Whorled loosestrife.

- * **L. terrestris** (Linnæus). Bulbous loosestrife.
L. stricta Aiton.

- * **L. Nummularia** Linnæus. Moneywort.
Sparingly escaped from old gardens.

ANAGALLIS Linnæus.

- * **A. arvensis** Linnæus. Poor man's weather-glass.

EBENACEÆ Ventenat.

EBONY FAMILY. V-10.

DIOSPYROS Linnæus.

- * **D. Virginiana** Linnæus. Persimmon.
Probably our rarest tree, found only in three or four stations.

OLEACEÆ Lindley.

OLIVE FAMILY. V-13.

FRAXINUS Linnæus.

- * **F. Americana** Linnæus. White ash.

- * **F. lanceolata** Borkhausen. Green ash.
F. viridis Michaux.

- † **F. Pennsylvanica** Marshall. Red ash.
F. pubescens Lamarck.

- ? **F. quadrangulata** Michaux. Blue ash.

- * **F. nigra** Marshall. Black ash.
F. sambucifolia Lamarck.

Stowe Township. Wet woods. Graham tract, Sept. 15, 1899.

LIGUSTRUM Linnæus.

- * **L. vulgare** Linnæus. Privet.
Spontaneous about old gardens.

APOCYNACEÆ Lindley.

DOGBANE FAMILY. V-17.

APOCYNUM Linnæus.

- * **A. androsæmifolium** Linnæus. Spreading dogbane.
- * **A. cannabinum** Linnæus. Indian hemp.
- * **A. cannabinum glaberrimum** De Candolle.
- * **A. hypericifolium** Aiton. Clasping-leaved dogbane.
Penn Township, river bank, A. V. R. R., at mile-post 8, June,
1884.

VINCA Linnæus.

- * **V. minor** Linnæus. Periwinkle.
Occasionally escaped near old graveyards.

ASCLEPIADACEÆ Lindley.

MILKWEED FAMILY. V-18.

ASCLEPIAS Linnæus.

- * **A. tuberosa** Linnæus. Pleurisy-root.

- * **A. incarnata** Linnæus. Swamp milkweed.
A white-flowering form, Moon Township, near Coraopolis,
August, 1890.
- * **A. Syriaca** Linnæus. Common milkweed.
A. Cornuti Decaisne.
- * **A. exaltata** (Linnæus). Poke milkweed.
A. phytolaccoides Pursh.
- † **A. variegata** Linnæus. White milkweed.
- * **A. quadrifolia** Jacquin. Four-leaved milkweed.

ACERATES Elliott.

- * **A. viridiflora** (Rafinesque). Green milkweed.
Moon Township, Shafer farm, July, 1887. Harrison Township,
John Pott's farm, July, 1895.

GENTIANACEÆ Dumortier.

GENTIAN FAMILY. V-15.

SABBATIA Adanson.

- * **S. angularis** (Linnæus). Rose-pink.

GENTIANA Linnæus.

- * **G. crinita** Frœlich. Fringed gentian.
Shaler Township, Miller farm, July, 1886. Hon. J. D. Shafer.
- * **G. Andrewsii** Grisebach. Closed gentian.

OBOLARIA Linnæus.

- * **O. Virginica** Linnæus. Pennywort.
"Woods below Sewickley, 1868," Rev. S. W. Knipe. Moon
Township, McKee tract, May 8, 1887.

POLEMONIACEÆ De Candolle.

PHLOX FAMILY. V-21.

PHLOX Linnæus.

- † *P. paniculata* Linnæus. Garden phlox.
- * *P. maculata* Linnæus. Wild Sweet-William.
- * *P. divaricata* Linnæus. Wild blue phlox.
- * *P. subulata* Linnæus. Moss-pink.

POLEMONIUM Linnæus.

- * *P. reptans* Linnæus. Greek valerian.

HYDROPHYLLACEÆ.

WATER-LEAF FAMILY. V-22.

HYDROPHYLLUM Linnæus.

- * *H. Virginicum* Linnæus. Virginia water-leaf.
- * *H. Canadense* Linnæus. Broad water-leaf.
- * *H. appendiculatum* Michaux. Appendaged water-leaf.

PHACELIA Jussieu.

- * *P. Purshii* Buckley. Pursh's phacelia.

BORAGINACEÆ Lindley.

BORAGE FAMILY. V-23.

CYNOGLOSSUM Linnæus.

- * *C. officinale* Linnæus. Hound's-tongue.
- * *C. Virginicum* Linnæus. Wild comfrey.

LAPPULA Mœnch.**ECHINOSPERMUM** Swartz.

* **L. Virginiana** (Linnæus). Beggar's-lice.

* **L. Lappula** (Linnæus). European burseed.

MERTENSIA Roth.

* **M. Virginica** (Linnæus). Bluebells.

MYOSOTIS Linnæus.

* **M. laxa** Lehmann. Smaller forget-me-not.

* **M. Virginica** (Linnæus). Early scorpion-grass.

M. verna Nuttall.

LITHOSPERMUM Linnæus.

* **L. arvense** Linnæus. Corn gromwell.

† **L. officinale** Linnæus. Gromwell.

* **L. latifolium** Michaux. American gromwell.

Pittsburg, hilltop near Salt-works Station, B. & O. R. R., 1891,
Dr. A. Koenig.

ECHIUM Linnæus.

* **E. vulgare** Linnæus. Bluweed.

SYMPHYTUM Linnæus.

† **S. officinale** Linnæus. Comfrey.

CONVOLVULACEÆ Ventenat.

MORNING-GLORY FAMILY. V-19.

IPOMŒA Linnæus.

* **I. hederacea** Jacquin. Ivy-leaved morning-glory.

Moon Township, T. A. Shafer heirs' farm, Sept., 1887.

- * **I. purpurea** (Linnæus). Morning-glory.
Often escaped to waste places.

- * **I. pandurata** (Linnæus). Wild potato vine.

CONVOLVULUS Linnæus.

- * **C. spithamæus** Linnæus. Upright bindweed.

- * **C. sepium** Linnæus. Great bindweed.

- * **C. Japonicus** Thunberg. Double morning-glory.
The double form occasionally escaped.

- || **C. arvensis** Linnæus. Small bindweed.

CUSCUTACEÆ Dumortier.

DODDER FAMILY. V-20.

CUSCUTA Linnæus.

- * **C. Gronovii** Willdenow. Gronovius' dodder.

SOLANACEÆ Persoon.

NIGHTSHADE FAMILY. V-26.

SOLANUM Linnæus.

- * **S. Dulcamara** Linnæus. Bittersweet.
Allegheny, Highwood Cemetery, in woods. John Ferguson.

- * **S. nigrum** Linnæus. Black nightshade.

- * **S. Carolinense** Linnæus. Horse-nettle.

PHYSALIS Linnæus.

- *? **P. Philadelphica** Lamarck. Philadelphia ground-cherry.

*? *P. pubescens* Linnæus. Low hairy ground-cherry.

*? *P. heterophylla* Nees. Clammy ground-cherry.

? *P. viscosa* Linnæus. Stellate ground-cherry.

PHYSALODES Bœhmer.

NICANDRA Adanson.

* *P. Physalodes* (Linnæus). Apple-of-Peru.

Stowe Township, Davis Island Station, P. & L. E. R. R., Oct.,
1885.

LYCIUM Linnæus.

* *L. vulgare* (Aiton, f.). Matrimony vine.

DATURA. Linnæus.

* *D. Stramonium* Linnæus. Jimson-weed.

* *D. Tatula* Linnæus. Purple thorn-apple.

LYCOPERSICON Miller.

* *L. Lycopersicon* (Linnæus). Tomato.

Frequently spontaneous about waste places in the city.

PETUNIA Jussieu.

* *P. axillaris* (Lamarck). White petunia.

Escaped from gardens.

* *P. violacea* Lindley. Violet petunia.

Escaped, more frequently than the last.

SCROPHULARIACEÆ Lindley.

FIGWORT FAMILY. V-27.

VERBASCUM Linnæus.

- * **V. Thapsus** Linnæus. Velvet mullein.
- * **V. Blattaria** Linnæus. Moth-mullein.

LINARIA Jussieu.

- * **L. Linaria** (Linnæus). Toad-flax.
L. vulgaris Miller.

SCROPHULARIA Linnæus.

- * **S. Marylandica** Linnæus. Figwort.

COLLINSIA Nuttall.

- * **C. verna** Nuttall. Blue-eyed Mary.
Robinson Township, Scully's Springs, May, 1893, Prof. G.
Guttenberg.

CHELONE Linnæus.

- * **C. glabra** Linnæus. Turtle-head.

PENTSTEMON Solander.

- * **P. hirsutus** (Linnæus). Hairy beard-tongue.
P. pubescens Solander.
- * **P. Digitalis** (Sweet). Foxglove beard-tongue.

MIMULUS Linnæus.

- * **M. ringens** Linnæus. Square-stemmed monkey-flower.
- † **M. alatus** Solander. Winged monkey-flower.

GRATIOLA Linnæus.

* **G. Virginiana** Linnæus. Clammy hedge-hyssop.

† **G. aurea** Muhlenberg. Golden hedge-hyssop.

ILYSANTHES Rafinesque.

* **I. gratioloides** (Linnæus). False pimpernel.

LEPTANDRA Nuttall.**VERONICA** Linnæus.

* **L. Virginica** (Linnæus). Culver's-root.

VERONICA Linnæus.

* **V. spicata** Linnæus. Spiked speedwell.

Moon Township, old orchard near Carnot, July, 1895.

† **V. Anagallis-aquatica** Linnæus. Water speedwell.

* **V. Americana** Schweinitz. American speedwell.

* **V. scutellata** Linnæus. Skull-cap speedwell.

Robinson Township, ditches near Groveton, June, 1898.

* **V. officinalis** Linnæus. Common speedwell.

* **V. serpyllifolium** Linnæus. Thyme-leaved speedwell.

* **V. peregrina** Linnæus. Purslane speedwell.

* **V. arvensis** Linnæus. Corn speedwell.

GERARDIA Linnæus.

* **G. tenuifolia** Vahl. Slender gerardia.

DASYSTOMA Linnæus.*GERARDIA* Linnæus.

- * **D. Pedicularia** (Linnæus). Fern-leaved false foxglove.
Moon Township, Wm. Tomlinson's woods, Aug., 1896.
- * **D. flava** (Linnæus). Downy false foxglove.
- † **D. lævigata** Rafinesque. Entire-leaved false foxglove.

CASTILLEJA Mutis.

- * **C. coccinea** (Linnæus). Scarlet painted-cup.
Marshall Township, near Thorn Hill, May, 1886.

PEDICULARIS Linnæus.

- * **P. Canadensis** Linnæus Wood betony.

OROBANCHACEÆ Lindley.

BROOM-RAPE FAMILY. V-29.

LEPTAMNIUM Rafinesque.*EPIPHEGUS* Nuttall.

- * **L. Virginianum** (Linnæus). Beech-drops.

CONOPHOLIS Wallroth.

- * **C. Americana** (Linné). Squaw-root.

THALESIA Rafinesque.*APHYLLON* A. Gray.

- * **T. uniflora** (Linnæus). Cancer-root.

BIGNONIACEÆ Persoon.

TRUMPET-CREEPER FAMILY. V-30.

TECOMA Jussieu.

- * **T. radicans** (Linnæus). Trumpet-creeper.
Moon Township, Deadman's Island, July, 1896.

CATALPA Scopoli.

- * **C. Catalpa** (Linnæus). Indian bean.

C. bignonioides Walter.

Pittsburgh, Stanton Ave., spontaneous, frequently so elsewhere about the city.

ACANTHACEÆ St. Hilaire.

ACANTHUS FAMILY. V-32.

DIANTHERA Linnæus.

- D. Americana** Linnæus. Water willow.

VERBENACEÆ St. Hilaire.

VERVAIN FAMILY. V-24.

VERBENA Linnæus.

- * **V. urticifolia** Linnæus. Nettle leaved vervain.

- * **V. hastata** Linnæus. Blue vervain.

- § **V. stricta** Ventenat. Hoary vervain.

LIPPIA Linnæus.

- * **L. lanceolata** Michaux. Frog-fruit.

Allegheny, "River bank, near glass-house ripple." John Ferguson.

PHRYMACEÆ Schauer.

LOPSEED FAMILY. V-32.*

PHRYMA Linnæus.

- * **P. Leptostachya** Linnæus. Lopseed.

LABIATÆ B. Jussieu.

MINT FAMILY. V-25.

ISANTHUS Michaux.

- * **I. brachiatus** (Linnæus). False pennyroyal.
I. caruleus Michaux.

TEUCRIUM Linnæus.

- * **T. Canadense** Linnæus. Wood sage.

COLLINSONIA Linnæus.

- * **C. Canadensis** Linnæus. Stone-root.

MENTHA Linnæus.

- * **M. rotundifolia** (Linnæus). Round-leaved mint.
Old gardens ; occasionally spontaneous.

- * **M. spicata** Linnæus. Spearmint.
M. viridis Linnæus.

- * **M. piperita** Linnæus. Peppermint.

- || **M. crispa** Linnæus. Curled mint.

- † **M. arvensis** Linnæus. Field mint.

- * **M. Canadensis**. Wild mint.

LYCOPUS Linnæus.

- * **L. Virginicus** Linnæus. Bugle-weed.

- * **L. Americanus** Muhlenberg. Cut-leaved water horehound.
L. sinuatus Elliott.

- † **L. Europæus** Linnæus. Water horehound.

PERILLA Arduino.

- * **P. frutescens** (Linnæus). Perilla.
Pittsburgh ; spontaneous in old gardens.

CUNILA Linnæus.

- * **C. origanoides** (Linnæus). American dittany.
C. Mariana Linnæus.

KÆLLIA Mœnch.*PYCNANTHEMUM* Michaux.

- * **K. Virginiana** (Linnæus). Virginia mountain-mint.
P. lanceolatum Pursh.
Hulton, August 1, 1888. Dr. Adolph Koenig.
- * **K. flexuosa** (Walker). Narrow-leaved mountain-mint.
P. linifolium Pursh.
Sterrett Township, near Edgewood, August, 1885. C. C. Mellor.
- * **K. verticillata** (Michaux). Torrey's mountain-mint.
P. Torreyi Benth.
Fawn Township, Branch of Bull Creek, near Schoolhouse No. 2,
August, 1900.
- * **K. incana** (Linnæus). Hoary mountain-mint.

CLINOPODIUM Linnæus.*CALAMINTHA* Mœnch.

- * **C. vulgare** Linnæus. Wild basil.
C. Clinopodium Benth.

MELISSA Linnæus.

- * **M. officinalis** Linnæus. Lemon balm.

HEDEOMA Persoon.

- H. pulegioides** (Linnæus). American pennyroyal.

SALVIA Linnæus.

- † **S. lyrata** Linnæus. Lyre-leaved sage.

MONARDA Linnæus.

- * **M. didyma** Linnæus. Oswego tea.
- || **M. media** Willdenow. Purple bergamot.
Moon Township, Flaugherty's Run, August, 1893.
- * **M. fistulosa** Linnæus. Wild bergamot.

BLEPHILIA Rafinesque.

- * **B. ciliata** (Linnæus). Downy blephilia.
- * **B. hirsuta** (Pursh). Hairy blephilia.

AGASTACHE Clayton.**LOPHANTHUS** Benthham.

- * **A. nepetoides** (Linnæus). Catnip giant-hyssop.
- * **A. scrophulariæfolius** (Willdenow). Figwort giant-hyssop.
Moon Township, thickets near Thorn Run Station, August, 1897,
Oct., 1900.
Harrison Township, roadside near Sligo, Sept., 1900.

NEPETA Linnæus.

- * **N. Cataria** Linnæus. Catnip.

GLECOMA Linnæus.

- * **G. hederacea** Linnæus. Ground ivy.
Nepeta Glechoma Benthham.

MEEHANIA Britton.*CEDRONELLA* Moench.

- * **C. cordata** (Nuttall). Meehania.

Mifflin Township, Howard Station, June, 1893, Prof. G. Guttentberg.

PHYSOSTEGIA Bentham.

- * **P. Virginiana** (Linnæus). False dragon-head.

Robinson Township, Moon Run Station, Sept. 11, 1886. Prof.

B. H. Patterson.

Moon Township, Deadman's Island, July, 1896.

PRUNELLA Linnæus.

- * **P. vulgaris** Linnæus. Heal-all.

SCUTELLARIA Linnæus.

- * **S. lateriflora** Linnæus. Mad-dog skullcap.

- * **S. saxatilis** Riddell. Rock skullcap.

Moon Township, Laschell's Hollow ; August 1, 1898.

- * **S. incana** Muhlenberg. Downy skullcap.

S. canescens Nuttall.

- * **S. pilosa** Michaux. Hairy skullcap.

O'Hara Township, Darlington's Hollow, August 17, 1884.

- * **S. parvula** Michaux. Small skullcap.

- † **S. galericulata** Linnæus. Marsh skullcap.

- * **S. nervosa** Pursh. Veined skullcap.

MARRUBIUM Linnæus.

- * **M. vulgare** Linnæus. Hoarhound.
Moon Township, roadside near Carnot, August, 1898.
Fawn Township, roadside near Bull Creek, near Tarentum, August, 1900.

LEONURUS Linnæus.

- * **L. Cardiaca** Linnæus. Motherwort.

GALEOPSIS Linnæus.

- † **G. Tetrahit** Linnæus. Hemp-nettle.

STACHYS Linnæus.

- * **S. palustris** Linnæus. Hedge-nettle.
Hampton Township, Wildwood Station, July 9, 1891, Dr. Adolph Koenig.
- † **S. aspera** Michaux. Rough hedge-nettle.

LAMIUM Linnæus.

- * **L. amplexicaule** Linnæus. Henbit dead-nettle.
- * **L. maculatum** Linnæus. Spotted dead-nettle.
Old gardens, occasionally spontaneous.

PLANTAGINACEÆ Lindley.

PLANTAIN FAMILY. V-33.

PLANTAGO Linnæus.

- * **P. major** Linnæus. Common plantain.
Not so common as the next.
- * **P. Rugelii** Decaisne. Rugel's plantain.

- * **P. lanceolata** Linnaeus. English plantain.
- * **P. aristata** Michaux. Large-bracted plantain.
- * **P. Virginica** Linnaeus. Dwarf plantain.

AMARANTHACEÆ J. St. Hilaire.

AMARANTH FAMILY. IV-16.

AMARANTHUS Linnaeus.

- * **A. hybridus** Linnaeus. Slender pigweed.
A. chlorostachys Willdenow.
- * **A. hybridus paniculatus** (Linnaeus). Red pigweed.
- * **A. retroflexus** Linnaeus. Rough pigweed.
- † **A. græcizans** Linnaeus. Tumble-weed.
A. albus Linnaeus.
- * **A. blitoides** Watson. Prostrate amaranth.

CHENOPODIACEÆ Dumortier.

GOOSEFOOT FAMILY. IV-15.

CHENOPODIUM Linnaeus.

- * **C. album** Linnaeus. Lamb's quarters.
- * **C. glaucum** Linnaeus. Oak-leaved goosefoot.
Harrison Township, streets of Natrona, August, 1895-1900.
- * **C. urbicum** Linnaeus. City goosefoot.
- † **C. hybridum** Linnaeus. Maple-leaved goosefoot.
Rev. S. W. Knipe, 1869?

* **C. Bonus-Henricus** Linnæus. Good King Henry.

* **C. Botrys** Linnæus. Jerusalem oak.

* **C. ambrosioides** Linnæus. Mexican tea.

* **C. anthelminticum** Linnæus. Wormseed.

BLITUM Linnæus.

† **B. capitatum** Linnæus. Strawberry blite.

ATRIPLEX Linnæus.

† **A. patula** Linnæus. Spreading orache.

* **A. hastata** Linnæus. Halberd-leaved orache.

† **A. rosea** Linnæus. Red orache.

SALSOLA Linnæus.

* **S. Tragus** Linnæus. Russian thistle.

Harrison Township, Natrona. July, 1895.

PHYTOLACCACEÆ Lindley.

POKEWEED FAMILY. IV-17.

PHYTOLACCA Linnæus.

* **P. decandra** Linnæus. Pokeweed.

POLYGONACEÆ Lindley.

BUCKWHEAT FAMILY. IV-14.

RUMEX Linnæus.

* **R. Acetosella** Linnæus. Sheep sorrel.

- † *R. verticillatus* Linnæus. Swamp dock.
- * *R. crispus* Linnæus. Curled dock.
- * *R. obtusifolius* Linnæus. Bitter dock.
- † *R. conglomeratus* Murray. Smaller green dock.
- † *R. sanguineus* Linnæus. Red veined dock.

POLYGONUM Linnæus.

- ? *P. maritimum* Linnæus. Seaside knotweed.
- * *P. aviculare* Linnæus. Door-weed.
- * *P. erectum* Linnæus. Erect knotweed.
- * *P. ramosissimum* Michaux. Bushy knotweed.
Allegheny R. R. near outer depot, 1886, Dr. A. Ziegler.
- † *P. incarnatum* Elliott. Slender pink persicaria.
- * *P. Pennsylvanicum* Linnæus. Pennsylvania persicaria.
- * *P. orientale* Linnæus. Prince's feather.
- * *P. Persicaria* Linnæus. Lady's thumb.
- * *P. hydropiperoides* Michaux. Mild waterpepper.
- * *P. Hydropiper* Linnæus. Smart-weed.
- * *P. punctatum* Elliott. Water smart-weed.
P. acre Humboldt, Bonpland & Kunth.

- || **P. emersum** (Michaux). Swamp persicaria.
Davis Island. Shore at head of island, August, 1898.
- * **P. Virginianum** Linnæus. Virginia knotweed.
- * **P. arifolium** Linnæus. Halberd-leaved tear-thumb.
Stowe Township, swamp near Turner Station, Sept. 15, 1899.
- * **P. sagittatum** Linnæus. Arrow-leaved tear-thumb.
- * **P. convolvulus** Linnæus. Black bindweed.
- * **P. scandens** Linnæus. Climbing false buckwheat.
- * **P. cilinode** Michaux. Fringed black bindweed.

FAGOPYRUM Gärtner.

- * **F. Fagopyrum** (Linnæus). Buckwheat.

ARISTOLOCHIACEÆ Blume.

BIRTHWORT FAMILY. IV-13.

ASARUM Linnæus.

- * **A. Canadense** Linnæus. Wild ginger.
Moon Township, among rocks, Laschell's Hollow, April 20,
1899.
- * **A. reflexum** Bicknell. Short-lobed wild ginger.
Our commonest form, seems to belong here.

ARISTOLOCHIA Linnæus.

- * **A. Serpentaria** Linnæus. Virginia snakeroot.
- * **A. macrophylla** Lamarck. Dutchman's pipe.
A. Siphon L'Heritier.

“This grows naturally near Pittsburgh in a rich soil and shaded situation.” Humphrey Marshall, in “*Arbustum Americanum*,” 1785.

Wooded hillside, south bank of Ohio River, 1884-1900, J. A. S.

SAURURACEÆ Lindley.

LIZARD'S-TAIL FAMILY. IV-1.

SAURURUS Linnæus.

- * *S. cernuus* Linnæus. Lizard's-tail.

LAURACEÆ Lindley.

LAUREL FAMILY. IV-30.

SASSAFRAS Nees & Ebermaier.

- * *S. Sassafras* (Linnæus). Sassafras.
S. officinale Nees & Ebermaier.

BENZOIN Fabricius.

LINDERA Thunberg.

- * *B. Benzoïn* (Linnæus). Spice-bush.

SANTALACEÆ R. Brown.

SANDALWOOD FAMILY. IV-12.

COMANDRA Nuttall.

- * *C. umbellata* (Linnæus). Bastard toad-flax.

LORANTHACEÆ D. Don.

MISTLETOE FAMILY. IV-11.

PHORADENDRON Nuttall.

- † *P. flavescens* (Pursh). American mistletoe.

On an old oak which used to stand on the campus of the Western University of Pennsylvania, Allegheny, Dr. W. J. Holland.

EUPHORBIACEÆ J. St. Hilaire.

SPURGE FAMILY. IV-57.

EUPHORBIA Linnæus.

- * **E. maculata** Linnæus. Spotted spurge.
- * **E. nutans** Lagasca. Large spotted spurge.
E. Preslii Gussone.
- * **E. corollata** Linnæus. Flowering spurge.
- * **E. Peplus** Linnæus. Petty spurge.
Harrison Township, near Upper Schoolhouse No. 1, August,
1895-1900.
- * **E. commutata** Engelm. Tinted spurge.
South Fayette Township, near Marshalsea, May 11, 1900.
- * **E. Cyparissias** Linnæus. Cypress spurge.
Frequently escaped from old graveyards.

ACALYPHA Linnæus.

- * **A. Virginica** Linnæus. Three-seeded Mercury.

ULMACEÆ Mirbel.

ELM FAMILY. IV-8.

ULMUS Linnæus.

- * **U. fulva** Michaux. Slippery, or red elm.
- * **U. Americana** Linnæus. American, or white elm.
- * **U. racemosa** Thomas. Cork, or rock elm.
Allegheny, Highwood Cemetery; apparently native.

CELTIS Linnæus.

- * **C. occidentalis** Linnæus. Hackberry.

MORACEÆ Lindley.

MULBERRY FAMILY. IV-9.

CANNABIS Linnæus.

- * **C. sativa** Linnæus.
Pittsburgh, occasionally, in waste places.

HUMULUS Linnæus.

- * **H. Lupulus** Linnæus. Hop.
Doubtfully native.

TOXYLON Rafinesque.*MACLURA* Nuttall.

- * **T. pomiferum** Rafinesque. Osage orange.
M. aurantiaca Nuttall.
Escaped from hedges.

MORUS Linnæus.

- * **M. rubra** Linnæus. Red mulberry.
- * **M. alba** Linnæus. White mulberry.
Moon Township, two trees by fence-row, Wm. Tomlinson's, 1890.

URTICACEÆ Reichenbach.

NETTLE FAMILY. IV-10.

URTICA Linnæus.

- * **U. gracilis** Aiton. Slender nettle.
- † **U. dioica** Linnæus. Stinging nettle.

URTICASTRUM Fabricius.*LAPORTEA* Gaudichaud.

- * **U. divaricatum** (Linnæus). Wood nettle.
L. Canadensis Gaudichaud.

ADICEA Rafinesque.*PILEA* Lindley.

- * **A. pumila** (Linnæus). Clearweed.

PLATANACEÆ Lindley.

PLANE-TREE FAMILY. IV-42.

PLATANUS Linnæus.

- * **P. occidentalis** Linnæus. Sycamore.

JUGLANDACEÆ Lindley.

WALNUT FAMILY. IV-2.

JUGLANS Linnæus.

- * **J. cinerea** Linnæus. Butternut.

* **J. nigra** Linnæus. Black walnut.

HICORIA Rafinesque.*CARYA* Nuttall.

- * **H. ovata** (Miller). Shell-bark.
C. alba Nuttall.

† **H. laciniosa** (Michaux f.). Big shell-bark.
C. sulcata Nuttall.

* **H. alba** (Linnæus). Bull-nut.
C. tomentosa Nuttall.

† **H. odorata** (Marshall). Small-fruited hickory.
C. microcarpa Nuttall.

- * **H. glabra** (Miller). Pig-nut.
C. porcina Nuttall.

- * **H. minima** (Marshall). Bitter-nut.
C. amara Nuttall.

BETULACEÆ Agardh.

BIRCH FAMILY. IV-6.

BETULA Linnæus.

- * **B. lenta** Linnæus. Sweet birch.
- † **B. lutea** Michaux f. Yellow birch.

ALNUS Gærtner.

- * **A. rugosa** (DuRoi). Smooth alder.
A. serrulata Willdenow.

CORYLUS Linnæus.

- * **C. Americana** Walker. Hazel-nut.

OSTRYA Scopoli.

- * **O. Virginiana** (Miller). Hop-tree.

CARPINUS Linnæus.

- * **C. Caroliniana** Walter. American iron-wood.

FAGACEÆ Drude.

BEECH FAMILY. IV-7.

QUERCUS Linnæus.

- * **Q. alba** Linnæus. White oak.
- † **Q. minor** (Marshall). Post oak.
Q. stellata Wangenheim.

- * **Q. macrocarpa** Michaux. Mossy-cup oak.
McKees Rocks, on Creek near Schoolhouse.
- * **Q. platanoides** Lamarck. Swamp white oak.
Q. bicolor Willdenow.
Stowe Township, low woods on Graham place, Sept. 15, 1899.
- * **Q. Prinus** Linnæus. Rock chestnut oak.
- † **Q. acuminata** (Michaux). Yellow oak.
Q. Muhlenbergii Engelmänn.
- † **Q. prinoides** Willdenow. Chestnut scrub-oak.
Richland Township, near Bakerstown. Hon. J. D. Shafer.
- * **Q. rubra** Linnæus. Red oak.
- * **Q. coccinea** Wangenheim. Scarlet oak.
- * **Q. velutina** Lamarck. Black oak.
Q. tinctoria Gray.
- * **Q. palustris** DuRoi. Pin oak.
- ? **Q. digitata** (Marshall). Spanish oak.
Q. falcata Michaux.
- † **Q. nana** (Marshall). Bear scrub oak.
Q. ilicifolia Wangenheim.
- † **Q. Marylandica** Muenchausen. Barren oak.
Q. nigra Linnæus.
- * **Q. imbricaria** Michaux. Laurel oak.
- ? **Q. Phellos** Linnæus. Willow oak.

CASTANEA Adanson.

- * **C. dentata** (Marshall). Chestnut.

FAGUS Linnæus.

- * **F. Americana** Sweet. American beech.

SALICACEÆ Lindley.

WILLOW FAMILY. IV-5.

SALIX Linnæus.

- * **S. nigra** Marshall. Black willow.
- † **S. lucida** Muhlenberg. Shining willow.
- † **S. fragilis** Linnæus. Crack willow.
- † **S. alba** Linnæus. White willow.
- || **S. Babylonica** Tournefort. Weeping willow.
- * **S. fluviatilis** Nuttall. Sand-bar willow.
S. longifolia Marshall.
- * **S. discolor** Muhlenberg. Glauous willow.
- ? **S. humilis** Marshall. Prairie willow.
- * **S. sericea** Marshall. Silky willow.
- † **S. purpurea** Linnæus. Purple willow.
- † **S. cordata** Muhlenberg. Heart-leaved willow.

POPULUS Linnæus.

- * **P. alba** Linnæus. Silver-leaf poplar.
Escaped to roadsides.
- * **P. tremuloides** Michaux. American aspen.
Harrison Township, between farms of John Potts and Jos. Johnston, 1895-1900.
- * **P. grandidentata** Michaux. Large-toothed aspen.
- * **P. balsamifera** Linnæus. Balsam poplar.
- * **P. dilatata** Linnæus. Lombardy poplar.

CERATOPHYLLACEÆ A. Gray.

HORNWORT FAMILY. IV-23.

CERATOPHYLLUM Linnæus.

- † **C. demersum** Linnæus. Hornwort.
Pittsburgh, Silver Lake, 1885. C. C. Mellor.

PINACEÆ Lindley.

PINE FAMILY. II-1.

PINUS Linnæus.

- * **P. Strobus** Linnæus. White pine.
- * **P. Virginiana** Miller. Scrub pine.
P. inops Aiton.

TSUGA Carriere.

- * **T. Canadensis** (Linnæus). Hemlock.

JUNIPERUS Linnæus.

- * **J. Virginiana** Linnæus. Red cedar.

TAXACEÆ Lindley.

YEW FAMILY. II-2.

TAXUS Linnæus.|| **T. minor** (Michaux). American yew.*T. Canadensis* Willdenow.

Shaler Township, R. R. tunnel near Undercliff.

ORCHIDACEÆ Lindley.

ORCHID FAMILY. III-28.

LEPTORCHIS Thouans.*LIPARIS* L. C. Richard.* **L. liliifolia** (Linnæus). Large twayblade.

Moon Township, several stations, 1890. Allegheny, Highwood Cemetery, June, 1891. John Ferguson.

APLECTRUM Nuttall.* **A. spicatum** (Walter). Putty-root.*A. hyemale* Nuttall.

Moon Township, Owen Evans' woods, June, 1887.

CORALLORHIZA R. Brown.* **C. odontorhiza** (Willdenow). Small-flowered coral-root.

Moon Township, oak woods, T. A. Shafer heirs, August, 1889.

* **C. multiflora** Nuttall. Large coral-root.**GYROSTACHYS** Persoon.*SPIRANTHES* L. C. Richard.* **G. cernua** (Linnæus). Nodding ladies' tresses.* **G. gracilis** (Bigelow). Slender ladies' tresses.

Allegheny, Highwood Cemetery, August, 1898, John Ferguson.

PERAMIUM Salisbury.*GOODYERA* R. Brown.

- * **P. pubescens** (Willdenow). Downy rattlesnake plantain.

POGONIA Jussieu.

- * **P. verticillata** (Willdenow). Whorled pogonia.
Moon Township, the McKee tract, in fruit, July, 1887.

ORCHIS Linnæus.

- * **O. spectabilis** Linnæus. Showy orchis.

HABENARIA Willdenow.

- * **H. orbiculata** (Pursh). Round-leaved orchis.
Moon Township, the McKee tract, July, 1887.
- * **H. lacera** (Michaux). Ragged orchis.
- * **H. peramœna** A. Gray. Fringeless purple orchis.
Moon Township, near Thorn Run Station, August, 1898.

CYPRIPEDIUM Linnæus.

- * **C. hirsutum** Miller. Large yellow ladies' slipper.
C. pubescens Willdenow.
- * **C. acaule** Aiton. Moccasin-flower.
Moon Township, McKee tract, in fruit, September, 1888.

IRIDACEÆ Lindley.

IRIS FAMILY. III-25.

IRIS Linnæus.

- * **I. versicolor** Linnæus. Large blue flag.
- * **I. cristata** Aiton.
Robinson Township, hillside, near Brightwood Station.

GEMMINGIA Fabricius.*BELAMCANDA* Adanson.

- * **G. Chinensis** (Linnaeus). Blackberry lily.
Moon Township. Escaped from gardens.

SISYRINCHIUM Linnaeus.

- * **S. angustifolium** Miller. Pointed blue-eyed grass.
Allegheny, Highwood Cemetery, October, 1889, John Ferguson.
- * **S. graminoides** Bicknell. Stout blue-eyed grass.

AMARYLLIDACEÆ Lindley.

AMARYLLIS FAMILY. III-23.

HYPOXIS Linnaeus.

- * **H. hirsuta** (Linnaeus). Star-grass.
H. erecta Linnaeus.

DIOSCOREACEÆ Lindley.

YAM FAMILY. III-24.

DIOSCOREA Linnaeus.

- * **D. villosa** Linnaeus. Wild yam.

SMILACEÆ Ventenat.

SMILAX FAMILY. III-21.

SMILAX Linnaeus.

- * **S. herbacea** Linnaeus. Carrion-flower.
- * **S. rotundifolia** Linnaeus. Common greenbrier.
- * **S. glauca** Walter. Glaucous greenbrier.
Moon Township, Wm. Scott's farm, Nov. 10, 1899.
- † **S. hispida** Muhlenberg. Hispid greenbrier.

LILIACEÆ Adanson.

LILY FAMILY. III-19.

ALLIUM Linnæus.

- * **A. tricoccum** Aiton. Wild leek.
 South Fayette Township, near Herriotsville, May, 1871-1900.
 Rev. S. W. Knipe.
 Moon Township, J. J. Miller's Hollow, May, 1887-1899.

- * **A. cernuum** Roth. Wild onion.

- * **A. Canadense** Linnæus. Wild garlic.
 Pittsburgh, near Salt-works Station, June, 1887. Prof. B. H. Patterson.

- * **A. vineale** Linnæus. Field garlic.
 Robinson Township, field opposite Groveton Station, July, 1899.

ORNITHOGALUM Linnæus.

- * **O. umbellatum** Linnæus. Star of Bethlehem.
 Moon Township, margin of woods, Evans' farm, May, 1896.
 O'Hara Township, railroad embankment near Squaw Run, May, 1900.

QUAMASIA Rafinesque.

SCILLA Linnæus.

- † **Q. hyacinthina** (Rafinesque). Wild hyacinth.
 S. Fraseri A. Gray.
 South Fayette Township, near Herriotsville, May, 1871, Rev. S. W. Knipe.

HEMEROCALLIS Linnæus.

- * **H. fulva** Linnæus. Common day lily.
 Commonly escaped to roadsides near dwellings.

ERYTHRONIUM Linnæus.

- * **E. Americanum** Kerr. Yellow adder's-tongue, or dog's-tooth violet.
- * **E. albidum** Nuttall. White adder's-tongue, or dog's-tooth violet.

LILIUM Linnæus.

- † **L. Philadelphicum** Linnæus. Philadelphia lily.
- * **L. superbum** Linnæus. Turkscap lily.
- * **A. Canadense** Linnæus. Canada lily.

CONVALLARIACEÆ Link.

LILY-OF-THE-VALLEY FAMILY. III-20.

ASPARAGUS Linnæus.

- * **A. officinalis** Linnæus. Asparagus.

POLYGONATUM Adanson.

- * **P. biflorum** (Walter). Hairy Solomon's seal.
- * **P. commutatum** (Rœmer & Schultes). Smooth Solomon's seal.
P. giganteum Dietrich.

VAGNERA Adanson.*SMILACINA* Desfontaine.

- * **V. racemosa** (Linnæus). False Solomon's seal.

UNIFOLIUM Adanson.*MAIANTHEMUM* Wiggers.

- * **U. Canadense** (Desfontaine). False lily-of-the-valley.

DISPORUM Salisbury.*PROSARTES* Don.

- † **D. lanuginosum** (Michaux). Hairy disporum.

STREPTOPUS Michaux.

- § **S. amplexifolius** (Linnæus). Claspig twisted-stalk.

CLINTONIA Rafinesque.

- * **C. umbellulata** (Michaux). White clintonia.

MEDEOLA Linnæus.

- * **M. Virginiana** Linnæus. Indian cucumber-root.

TRILLIUM Linnæus.

- * **T. sessile** Linnæus. Sessile wake-robin.

- * **T. nivale** Riddell. Early wake-robin.

Lower St. Clair Township, Sawmill Run, at Jackson's Hollow,
April, 1886.

- * **T. grandiflorum** (Michaux). Large-flowered wake-robin.

- * **T. erectum** Linnæus. Fetid wake-robin.

The white form is less common.

- § **T. undulatum** Willdenow. Painted wake-robin.

T. erythrocarpum Michaux.

MELANTHACEÆ R. Brown.

BUNCH-FLOWER FAMILY. III-18.

UVULARIA Linnæus.

- * **U. perfoliata** Linnæus. Perfoliate bellwort.

- * **U. grandiflora** J. E. Smith. Large-flowered bellwort.

- * *U. sessilifolia* Linnæus. Sessile-leaved bellwort.

CHAMÆLIRIUM Willdenow.

- * *C. luteum* (Linnæus). Blazing-star.

C. Carolinianum Willdenow.

STENANTHIUM Kunth.

- * *S. robustum* S. Watson. Stout stenanthium.

Richland Township, near Gibsonia, August, 1900.

MELANTHIUM Linnæus.

- * *M. Virginicum* Linnæus. Bunch-flower.

Fawn Township, Branch of Bull Creek, Thos. Dixon's, July, 1896.

VERATRUM Linnæus.

- * *V. viride* Aiton. White hellebore.

Pine Township, Pine Creek, near Wexford, June, 1886.

COMMELINACEÆ Reichenbach.

SPIDERWORT FAMILY. III-15.

COMMELINA Linnæus.

- * *C. Virginica* Linnæus. Virginia day-flower.

TRADESCANTIA Linnæus.

- * *T. Virginiana* Linnæus. Spiderwort.

Marshall Township, wet field, near Thorn Hill P. O., June, 1896.

JUNCACEÆ Ventenat.

RUSH FAMILY. III-17.

JUNCUS Linnæus.

- * *J. effusus* Linnæus. Common soft rush.

- * *J. tenuis* Willdenow. Bath-grass.
- † *J. bufonius* Linnæus. Toad rush.
- * *J. acuminatus* Michaux. Sharp-fruited rush.
- * *J. Canadensis* J. Gay. Canada rush.
- ? *J. Cæsariensis* Coville. New Jersey rush.
J. asper Engelman.

JUNCOIDES Adanson.

LUZULA De Candolle.

- * *J. campestre* (Linnæus). Common wood-rush.
- † *J. pilosum* (Linnæus). Hairy wood-rush.

TYPHACEÆ J. St. Hilaire.

CAT-TAIL FAMILY. III-1.

TYPHA Linnæus.

- * *T. latifolia* Linnæus. Cat-tail.

SPARGANIACEÆ Agardh.

BURREED FAMILY. III-2.

SPARGANIUM Linnæus.

- † *S. eurycarpum* Engelman. Broad-fruited bur-reed.
- † *S. simplex* Hudson. Simple-stemmed bur-reed.

ARACEÆ Necker.

ARUM FAMILY. III-9.

ARISÆMA Martens.

- * *A. triphyllum* (Linnæus). Indian turnip.

- * **A. Dracontium** (Linnæus). Green dragon.

Sterrett Township, low woods near C. C. Mellor's place, July,
1886.

CALLA Linnæus.

- § **C. palustris** Linnæus. Water arum.

SPATHYEMA Rafinesque.

SYMPLOCARPUS Salisbury.

- * **S. fœtida** (Linnæus). Skunk cabbage.

ACORUS Linnæus.

- * **A. Calamus** Linnæus. Calamus-root.

LEMNACEÆ Dumortier.

DUCKWEED FAMILY. III-10.

LEMNA Linnæus.

- † **L. minor** Linnæus. Lesser duckweed.

- † **L. trisulca** Linnæus. Star duckweed.

VALLISNERIACEÆ Dumortier.

TAPE-GRASS FAMILY. III-6.

VALLISNERIA Linnæus.

- * **V. spiralis** Linnæus. Tape-grass.

O'Hara Township, Allegheny River above Aspinwall. September
20, 1899.

ALISMACEÆ De Candolle.

WATER-PLANTAIN FAMILY. III-5.

ALISMA Linnæus.

- * **A. Plantago-aquatica** Linnæus. Water-plantain.

SAGITTARIA Linnæus.

- * **S. latifolia** Willdenow. Broad arrow-leaf.
- S. variabilis* Engelmann.

NAIADACEÆ Lindley.

PONDWEED FAMILY. III-3.

POTAMOGETON Linnæus.

- * **P. natans** Linnæus. Common floating pondweed.

CYPERACEÆ J. St. Hilaire.

SEDGE FAMILY. III-8.

CYPERUS Linnæus.

- * **C. flavescens** Linnæus. Yellow cyperus.
- * **C. diandrus** Torrey. Low cyperus.
- * **C. rivularis** Kunth. Shining cyperus.
- † **C. strigosus** Linnæus. Straw-colored cyperus.
- * **C. speciosus** Vahl. Michaux's cyperus.

ELEOCHARIS R. Brown.

- * **E. ovata** (Roth). Ovoid spike-rush.
- † **E. palustris** (Linnæus). Creeping spike-rush.
- * **E. tenuis** (Willdenow). Slender spike-rush.

SCIRPUS Linnæus.

- * **S. lacustris** Linnæus. Great bulrush.

* *S. atrovirens* Muhlenberg. Dark bulrush.

* *S. polyphyllus* Vahl. Leafy bulrush.

* *S. lineatus* Michaux. Reddish bulrush.

* *S. cyperinus* (Linnæus). Wool-grass.

CAREX Linnæus.

§ *C. intumescens* Rudge. Bladder sedge.

* *C. Asa-Grayi* Bailey. Gray's sedge.

† *C. lupulina* Muhlenberg. Hop sedge.

† *C. lurida* Wahlenberg. Sallow sedge.

* *C. squarrosa* Linnæus. Squarrose sedge.

* *C. scabrata* Schweinitz. Rough sedge.

† *C. stricta* Lamarck. Tussock sedge.

† *C. torta* Boott. Twisted sedge.

* *C. prasina* Wahlenberg. Drooping sedge.

† *C. limosa* Linnæus. Mud sedge.

† *C. crinita* Lamarck. Fringed sedge.

§ *C. gynandra* Schweinitz. Nodding sedge.

- * **C. virescens** Muhlenberg. Downy green sedge.
- * **C. costellata** Britton. Ribbed sedge.
C. virescens var. *costata* Dewey.
- * **C. triceps** Michaux. Hirsute sedge.
- * **C. gracillima** Schweinitz. Graceful sedge.
- † **C. grisea** Wahlenberg. Gray sedge.
- * **C. glaucoidea** Tuckerman. Glaucous sedge.
- * **C. granularis** Muhlenberg. Meadow sedge.
- † **C. granularis Shriveri** Britton. Shriver's meadow sedge.
C. granularis var. *Haleana* Porter not *C. Halei* Dewey.
- † **C. flava** Linnæus. Yellow sedge.
- † **C. Hitchcockiana** Dewey. Hitchcock's sedge.
- † **C. laxiflora** Lamarck. Loose-flowered sedge.
- † **C. laxiflora patulifolia** (Dewey). Loose flowered sedge.
- † **C. Careyana** Torrey. Carey's sedge.
- * **C. Albursina** Sheldon. White-bear sedge.
C. laxiflora var. *latifolia* Boott.
- † **C. plantaginea** Lamarck. Plantain-leaved sedge.
- † **C. platyphylla** Carey. Broad-leaved sedge.

† *C. Pennsylvanica* Lamarck. Pennsylvania sedge.

* *C. varia* Muhlenberg. Emmons' sedge.

* *C. pubescens* Muhlenberg. Pubescent sedge.

* *C. Jamesii* Schweinitz. James' sedge.

* *C. stipata* Muhlenberg. Awl-fruited sedge.

* *C. vulpinoidea* Michaux. Fox sedge.

† *C. rosea* Schkuhr. Stellate sedge.

* *C. retroflexa* Muhlenberg. Reflexed sedge.

† *C. sparganioides* Muhlenberg. Bur-reed sedge.

* *C. cephalophora* Muhlenberg. Oval-headed sedge.

† *C. Muhlenbergii* Schkuhr. Muhlenberg's sedge.

* *C. tribuloides* Wahlenberg. Blunt broom sedge.

† *C. scoparia* Schkuhr. Pointed broom sedge.

GRAMINEÆ Jussieu.

GRASS FAMILY. III-7.

SPARTINA Schreber.

* *S. cynosuroides* (Linnæus). Tall marsh-grass.

SYNTHESISMA Walter.*PANICUM* Linnæus.

- * **C. linearis** (Krock). Small crab-grass.
P. glabrum Gaudin.
- * **S. sanguinalis** (Linnæus). Large crab-grass.
P. sanguinale Linnæus.

PANICUM Linnæus.

- † **P. proliferum** Lamarck. Spreading panicum.
- † **P. capillare** Linnæus. Witch grass.
- † **P. virgatum** Linnæus. Tall smooth panicum.
- † **P. Porterianum** Nash. Porter's panicum.
P. latifolium Walter.
- † **P. clandestinum** Linnæus. Hispid panicum.
- ? **P. commutatum** Schultes. Variable panicum.
- † **P. depauperatum** Muhlenberg. Starved panicum.
- * **P. pubescens** Lamarck. Hairy panicum.
- † **P. dichotomum** Linnæus. Forked panicum.
- † **P. laxiflorum** Lamarck. Lax-flowered panicum.
- * **P. Crus-galli** Linnæus. Cockspur grass.

IXOPHORUS Schlechtendal.*SETARIA* Beauvois.

- * **I. verticillatus** (Linnæus). Foxtail-grass.

† **I. glaucus** (Linnæus). Yellow foxtail.

† **I. viridis** (Linnæus). Bottle-grass.

* **I. Italicus** (Linnæus). Hungarian millet.

CENCHRUS Linnæus.

* **C. tribuloides** (Linnæus). Bur-grass.

HOMALOCENCHRUS Mieg.

LEERSIA Swartz.

† **H. Virginicus** (Willdenow). White grass.

† **H. oryzoides** (Linnæus). Rice cut-grass.

ANDROPOGON Linnæus.

* **A. furcatus** Muhlenberg. Forked beard-grass.

* **A. scoparius** Michaux. Broom beard-grass.

CHRYSOPOGON Trinius.

* **C. avenaceus** (Michaux). Indian grass.

C. nutans A. Gray.

PHALARIS Linnæus.

* **P. Canariensis** Linnæus. Canary-grass.

Occasionally about rubbish heaps.

* **P. arundinacea** Linnæus. Reed canary-grass.

The variegated form occasionally escaped from near-by gardens.

ANTHOXANTHUM Linnæus.

† **A. odoratum** Linnæus. Sweet vernal-grass.

MUHLENBERGIA Schreber.

- * **M. Mexicana** (Linnæus). Meadow muhlenbergia.
- † **M. tenuiflora** (Willdenow). Slender muhlenbergia.
- * **M. diffusa** Schreber. Dropseed grass.

BRACHYELYTRUM Schreber.

- † **B. erectum** (Schreber). Brachyelytrum.

PHLEUM Linnæus.

- * **P. pratense** Linnæus. Timothy.

ALOPECURUS Linnæus.

- * **A. pratensis** Linnæus. Meadow foxtail.

SPOROBOLUS R. Brown.

- * **S. vaginæflorus** (Torrey). Rush-grass.

AGROSTIS Linnæus.

- * **A. alba** Linnæus. Red-top.
- † **A. perennans** (Walter). Thin-grass.
- † **A. hyemalis** (Walter). Hair-grass.

CINNA Linnæus.

- † **C. arundinacea** Linnæus. Wood reed-grass.

ARRHENATHERUM Beauvois.

- † **A. elatius** (Linnæus). Oat-grass.

HOLCUS Linnæus.

- * **H. lanatus** Linnæus. Velvet-grass.

DESCHAMPSIA Beauvois.

- † **D. cæspitosa** (Linnæus). Tufted hair-grass.

AVENA Linnæus.

- * **A. sativa** Linnæus. Common oats.
Abundantly spontaneous.

DANTHONIA De Candolle.

- * **D. spicata** (Linnæus). Wild oat-grass.

ELEUSINE Gärtner.

- * **E. Indica** (Linnæus). Yard-grass.

EATONIA Rafinesque.

- † **E. obtusata** (Michaux). Blunt eatonia.

- † **E. Pennsylvanica** (De Candolle). Pennsylvania eatonia.

- † **E. nitida** (Sprengel). Slender eatonia.

E. Dudleyi Veasey.

Near Pittsburgh, Pa.; Wm. R. Dudley, in Cayuga Flora, p. 127.

ERAGROSTIS Beauvois.

- * **E. hypnoides** (Lamarck). Creeping eragrostis.

E. reptans Nees.

- † **E. Eragrostis** (Linnæus). Low eragrostis.

E. minor Host.

- * **E. major** Host. Scented eragrostis.

- * **E. pilosa** (Linnæus). Tufted eragrostis.

- † **E. Purshii** Schrader. Pursh's eragrostis.

- * **E. capillaris** (Linnæus). Capillary eragrostis.

UNIOLA Linnæus.

- * **U. latifolia** Michaux. Broad spike-grass.
 "Allegheny," 1888, C. B. Beadle.

DACTYLIS Linnæus.

- * **D. glomerata** Linnæus. Orchard-grass.

POA Linnæus.

- * **P. annua** Linnæus. Annual meadow-grass.
- * **P. compressa** Linnæus. Wire-grass.
- † **P. flava** Linnæus. False red-top.
P. serotina Ehrhart.
- * **P. pratensis** Linnæus. Kentucky blue-grass.
- * **P. trivialis** Linnæus. Roughish meadow-grass.
- * **P. sylvestris** Gray. Sylvan spear-grass.
- * **P. brevifolia** Muhlenberg. Short-leaved spear-grass.

PANICULARIA Fabricius.

GLYCERIA R. Brown.

- * **P. nervata** (Willdenow). Nerved manna-grass.
- † **P. Americana** (Torrey). Tall manna-grass.
G. grandis Watson.

FESTUCA Linnæus.

- † **F. ovina** Linnæus. Sheep's fescue-grass.

* **F. nutans** Willdenow. Nodding fescue-grass.

† **F. elatior** Linnæus. Tall fescue-grass.

BROMUS Linnæus.

* **B. secalinus** Linnæus. Upright chess, cheat.

† **B. racemosus** Linnæus. Wood chess.

† **B. ciliatus** Linnæus. Rye chess.

LOLIUM Linnæus.

† **L. perenne** Linnæus. Rye-grass.

AGROPYRON J. Gärtner.

* **A. repens** (Linnæus). Couch-grass.

TRITICUM Linnæus.

* **T. vulgare** Linnæus. Wheat.

Frequently spontaneous along railroad tracks.

SECALE Linnæus.

* **S. cereale** Linnæus. Rye.

Spontaneous in waste places, occasionally.

HORDEUM Linnæus.

* **H. vulgare** Linnæus. Common barley.

Along railroad tracks.

ELYMUS Linnæus.

* **E. Virginicus** Linnæus. Virginia wild rye.

* **E. Canadensis** Linnæus. Nodding wild rye.

HYSTRIX Mœnch.*ASPRELLA* Willdenow.

- * **H. Hystrix** (Linnæus). Bottle-brush grass.

EQUISETACEÆ Michaux.

HORSETAIL FAMILY. 1-8.

EQUISETUM Linnæus.

- * **E. arvense** Linnæus. Field horsetail.
- * **E. sylvaticum** Linnæus. Wood horsetail.
- * **E. hyemale** Linnæus. Common scouring-rush.
- * **E. lævigatum** Braun. Smooth scouring-rush.
Fawn Township, on banks of Bull Creek, July, 1885.

POLYPODIACEÆ R. Brown.

FERN FAMILY. 1-5.

POLYPODIUM Linnæus.

- * **P. vulgare** Linnæus. Common polypody.

ADIANTUM Linnæus.

- * **A. pedatum** Linnæus. Maiden-hair fern.

PTERIS Linnæus.

- * **P. aquilina** Linnæus. Bracken.

CHEILANTHES Swartz.

- * **C. lanosa** (Michaux). Hairy lip-fern.
C. vestita Swartz.

PELLÆA Link.

- § **P. atropurpurea** (Linnæus). Purple-stemmed cliff-brake.

ATHYRIUM Roth.*ASPLENium* Linnæus.

§ **A. pinnatifidum** (Nuttall). Pinnatifid spleenwort.

* **A. Trichomanes** (Linnæus). Maiden-hair spleenwort.

* **A. platyneuron** (Linnæus). Ebony spleenwort.

A. ebenum Aiton.

§ **A. montanum** (Willdenow). Mountain spleenwort.

* **A. angustifolium** (Michaux). Narrow-leaved spleenwort.

* **A. acrostichoides** (Swartz). Silvery spleenwort.

A. thelypteroides Michaux.

* **A. Filix-fœmina** (Linnæus). Lady-fern.

CAMPTOSORUS Link.

* **C. rhizophyllus** (Linnæus). Walking-fern.

PHEGopteris Fée.

* **P. hexagonoptera** (Michaux). Broad beech-fern.

* **P. Dryopteris** (Linnæus). Oak-fern.

Robinson Township, branch of Montour's Run, June 1, 1886.

DRYopteris Adanson.*ASPIDIUM* Swartz.

* **D. Thelypteris** (Linnæus). Marsh shield-fern.

* **D. Noveboracensis** (Linnæus). New York fern.

* **D. spinulosa intermedia** (Muhlenberg). Wood fern.

- * **D. cristata** (Linnæus). Crested shield-fern.
O'Hara Township, swamp, near Poor Farm, September 20, 1899.

- * **D. Goldieana** (Hooker). Goldie's fern.

- ? **D. Filix-mas** (Linnæus). Male fern.

- * **D. marginalis** (Linnæus). Evergreen wood-fern.

- * **D. acrostichoides** (Michaux). Christmas fern.

FILIX Adanson.

CYSTOPTERIS Bernhardt.

- * **F. bulbifera** (Linnæus). Bladder fern.

- * **F. fragilis** (Linnæus). Brittle fern.

ONOCLEA Linnæus.

- * **O. sensibilis** Linnæus. Sensitive fern.

- § **O. Struthiopteris** (Linnæus). Ostrich fern.

WOODSIA R. Brown.

- * **W. obtusa** Sprengel. Blunt-lobed woodsia.

DANNSTÆDTIA Bernhardt.

DICKSONIA L'Heritier.

- * **D. punctilobula** (Michaux). Hay-scented fern.

OSMUNDACEÆ R. Brown.

ROYAL FERN FAMILY. 1-2.

OSMUNDA Linnæus.

- * **O. regalis** (Linnæus). Royal fern.

O'Hara Township, swamp near Poor Farm, May, 1900, D. A. Atkinson.

O'Hara Township, Squaw Run, June, 1900. W. N. Miller.

* **O. cinnamomea** Linnæus. Cinnamon fern.

* **O. Claytoniana** Linnæus. Interrupted fern.

OPHIOGLOSSACEÆ Presl.

ADDER'S-TONGUE FAMILY. 1-1.

OPHIOGLOSSUM Linnæus.

† **O. vulgatum** Linnæus. Adder's tongue.

BOTRYCHIUM Swartz.

† **B. Lunaria** (Linnæus). Moonwort.

* **B. obliquum** Muhlenberg. Oblique grape fern.

* **B. dissectum** Sprengel. Cut-leaf grape fern.

* **B. Virginianum** (Linnæus). Virginia grape fern.

LYCOPODIACEÆ Michaux.

CLUBMOSS FAMILY. 1-9.

LYCOPODIUM Linnæus.

* **L. lucidulum** Michaux. Shining club-moss.

* **L. complanatum** Linnæus. Trailing club-moss.

Moon Township, Tomlinson's Hollow, near Carnot, April 18, 1898; Miss Lily Dally.

O'Hara Township, Squaw Run, October, 1899; J. L. Graf.

SELAGINELLACEÆ Underwood.

SELAGINELLA FAMILY. I-10.

SELAGINELLA Beauvois.

* **S. apus** (Linnæus). Creeping selaginella.

Fawn Township, Branch of Bull Creek, July, 1895.

Harrison Township, Little Bull Creek, near Burtner's stone house, August 25, 1900; John Thorpe.

III. SOME NEW AND LITTLE KNOWN FOSSIL VERTEBRATES.

BY J. B. HATCHER.

(PLATES I-IV.)

The present paper is based upon material brought together by the paleontological expedition of 1900, for which Mr. Andrew Carnegie generously supplied the necessary funds. The material has been freed from the matrix and prepared for study, either directly by, or under the immediate supervision of, Mr. A. S. Coggeshall, the chief preparator of the Museum in the Section of Vertebrate Paleontology. In the performance of this work Mr. Coggeshall has shown unusual skill and patience. The illustrations are from drawings by Mr. W. J. Carpenter and photographs by Mr. A. S. Coggeshall. In each instance they accurately illustrate important details of form and structure in the specimens described.

Class **PISCES.**

Platacodon nanus¹ Marsh.

In a former paper I have called attention to the undoubted ichthyic nature of the diminutive teeth collected by the writer several years ago and described by the late Professor Marsh as mammalian under the above name.² Subsequent to Professor Marsh's description of the types of this genus and species the present writer discovered in the same immediate locality, from which he secured the type specimens, two small dental plates, each bearing ankylosed teeth of the same size and pattern as the detached teeth described by Professor Marsh. The nature of these dental plates and the teeth they supported fixed at the same time their ichthyic nature and their identity with *Platacodon*. Both of these points Professor Marsh fully realized and frequently expressed in conversation with the writer. Other pressing duties doubtless prevented his making the necessary correction prior to his untimely death. During the past season I had occasion to visit the same

¹ See Am. Journ. Sci., Vol. XXXVIII, Aug., 1899, p. 178.

² See Science, N. S., Vol. XII, Nov. 9, 1900, p. 719.



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